

375

K48

Keep Your Card in This Pocket

Books will be issued only on presentation of proper library cards.

Unless labeled otherwise, books may be retained for four weeks. Borrowers finding books marked, defaced or mutilated are expected to report same at library desk; otherwise the last borrower will be held responsible for all imperfections discovered.

The card holder is responsible for all books drawn on this card.

Penalty for over-due books 2c a day plus cost of notices.

Lost cards and change of residence must be reported promptly.



Public Library
Kansas City, Mo.

Keep Your Card in This Pocket

0 0001 0184670 7

21840

22 Dec

21 No B

30 DE

10.45 SE 15'40W

19 MAR

NOV 12 '40

JA 25'40

27 No '37

29 DE 07 SE

DEC 26

26 MAR '38

DEC 7 45 34

16 JUL '38

AUG 6 '48 33

18 AUG

30 No '38

JUN 01 1995

14 JUL '39

29 Ju '39

SE 15 '39

18 No '39

22 DE '39

REMAKING THE CURRICULUM

REMAKING THE CURRICULUM

BY

WILLIAM HEARD KILPATRICK

*Professor of Philosophy of Education
Teachers College, Columbia University*



NEWSON & COMPANY
NEW YORK and CHICAGO

Other Books By WILLIAM H. KILPATRICK

(ISSUED BY VARIOUS PUBLISHERS)

The Dutch Schools of New Netherland and
Colonial New York (1912)

The Montessori System Examined (1914)

Froebel's Kindergarten Principles Critically Ex-
amined (1916)

Source Book in the Philosophy of Education
(1923, revised 1934)

Foundations of Method (1925)

Education for a Changing Civilization (1926)

How We Learn (1928)

Our Educational Task (1930)

Education and the Social Crisis (1932)

The Educational Frontier (editor and co-author,
1933)

COPYRIGHT, 1936, BY
NEWSON & COMPANY

[1]

PRINTED IN THE UNITED STATES OF AMERICA

PREFACE

When the publishers first suggested the publication of my N. E. A. *Journal* articles in book form, I declined on the grounds that the discussion was not full enough nor sufficiently inclusive to constitute a satisfactory book. In the end, however, I consented, with the idea that what is here presented could thereby gain a wider circulation until I could find time to write out my position at greater length and with greater inclusiveness.

As the enterprise progressed it seemed wiser to include along with the original seven articles a further related one that had originally appeared elsewhere, as this helps to elaborate a point that gives trouble to many.

My best thanks are due to Mr. Joy Morgan of the N. E. A. *Journal* for his introduction and to Miss Marion Y. Ostrander for assistance in seeing the book through the press and in finishing the index when I had to lay it aside.

WILLIAM H. KILPATRICK

Teachers College, Columbia University
June 10, 1936

CONTENTS

	PAGE
INTRODUCTION, BY JOY ELMER MORGAN	9
<hr/>	
CHAPTER I	
NEW DEVELOPMENTS, NEW DEMANDS	13
CHAPTER II	
RECENT PSYCHOLOGICAL DEVELOPMENTS	21
CHAPTER III	
THE SOCIAL SITUATION AND THE CURRICULUM . . .	34
CHAPTER IV	
THE CURRICULUM AS A PROCESS OF LIVING . . .	46
CHAPTER V	
SAFEGUARDING CURRICULUM RESULTS	58
CHAPTER VI	
SYSTEMATIC LEARNING ON THE NEW BASIS . . .	69
CHAPTER VII	
A SUGGESTED NEW SECONDARY CURRICULUM . . .	99
CHAPTER VIII	
OBJECTIVES FOR CURRICULUM AND METHOD . . .	108
<hr/>	
IN SUMMARY	116
INDEX	119

INTRODUCTION

The time has come when we can no longer delay our adjustment as a people to changed and changing conditions of economic, social, and political life. With one out of every four of our people dependent upon government for the bare necessities—and this in the midst of abundant natural and technical resources—people are asking “why” in ever more insistent tones. They are turning from the old to seek a new leadership and a program of action that shall square with their aspirations and needs, and with the resources around them.

All this means that the school faces destiny. It must create in the young a more dynamic intelligence, a surer initiative, a self-disciplined character, a broad and liberal social outlook.

Among those who have been first to sense the educational implications of the new situation stands Dr. William H. Kilpatrick. In 1926 a little volume of three lectures by Dr. Kilpatrick was published under the title *Education for a Changing Civilization*.

These lectures pointed out with prophetic insight that the times are changing; that these changes make new demands on education; and that our education must greatly change itself in order to meet the new situation.

Since these pioneer lectures were published the need for educational reform on all levels has become a necessity: on the college level, because students are then near the time when the major decisions of life must be made; on the high-school level, because of the vast numbers that have been added through unemployment; and on the elementary-school level, because of the changed home and neighborhood environment which today surrounds children.

The cycle of educational reform must include: first, a new philosophy and concept of education as it is related to the total life of the individual on the one hand and the total life of society on the other; second, changes in school plant and organization in keeping with this broadened concept; third, changes in the school curriculum to bring it into harmony with the new philosophy; fourth, changes in the preparation and in-service education of teachers to equip them to deal with the new situation; and finally, changes in public attitude necessary both to make the educational process itself effective and to insure adequate school finance.

In this little volume on *Remaking the Curriculum*, Dr. Kilpatrick has chosen to deal primarily with the

need for a new curriculum, but the point of view which he has stated shows equally well the need for more varied equipment, enriched teacher preparation, and a more enlightened attitude on the part of the general public. As author, lecturer, and professor of philosophy of education, Dr. Kilpatrick is our foremost interpreter of the pedagogy of activity and interest. He points out that schools exist to help the young grow and that each child must do his own growing. And how is this growth best fostered in the light of new social conditions and in accordance with the new psychological insight? That is the question which this book seeks to answer. It consists partly of seven articles which appeared in *The Journal of the National Education Association* beginning in November 1935 and ending in May 1936. Additional material has been added by the author to round out the discussion.

These articles were received with much appreciation by *The Journal's* two hundred thousand readers. Two of the articles, "Recent Psychological Developments" and "The Social Situation and the Curriculum," were ranked first by readers as the most helpful articles in their respective issues of *The Journal*. All the articles ranked high. All have substantial permanent value. Their publication in book form extends still further the author's contribution toward a new orientation of education and furnishes excellent material both for individual reading and for study in classes for the preparation of teachers.

To attract the finest and ablest young people into the schools as teachers should be the constant aim of everyone who has the future of our democratic civilization at heart. Nowhere else is the opportunity so great and the challenge so urgent. Books like this help to make that opportunity plain. May there be more of them!

June, 1936

JOY ELMER MORGAN
Editor, *The Journal of the*
National Education Association

REMAKING THE CURRICULUM

CHAPTER I

NEW DEVELOPMENTS, NEW DEMANDS

887629
887629
K48
Already in many places a better curriculum outlook has been achieved, and the general prospects for advance were perhaps never brighter. But much remains to be done. Our aims need to be clarified, appropriate content needs to be conceived, and the compelling reasons more firmly grasped; while all of us, including the many who still hesitate, need to be surer of the road to take.

The chief reason for a new curriculum and educational procedure lies in the fact that our modern social and thought world has brought forth significant new developments which in their turn make demands on the school that intelligent and conscientious educators can no longer disregard.

The customs and institutions of any well-ordered civilization should form one consistent and balanced

cultural whole. Amid quiet and abiding conditions the culture of any normal group does tend in time to develop such a balance. With us, however, science and technology have in recent years grown so rapidly that the remaining cultural arrangements now fall behind in failure to make adequate and just use of the possibilities thus offered. We need institutional changes. Perhaps the acutest lag of all lies in the failure of social thought and moral effort to grapple adequately with these new conditions and possibilities. Meanwhile our civilization suffers.

MODERN CHANGE

Most inclusive of the new developments now demanding attention is the fact of modern rapid change, much discussed but still tragically disregarded in social thinking and educational practice.

A modern notion of change has emerged. Affairs develop in ever novel fashion. New situations continually confront. New aims arise. Old knowledge and habits are reworked in with the new conditions, and new results appear. Culture thus accumulates: ever new knowledge, distinctions, attitudes, and techniques. Efficiency thus increases and social intelligence grows. Individual intelligence sharing

the new cultural product should grow correlatively.

Amid ever novel conditions thinking is stressed, mere habit could not suffice. Each new situation is a problem, demanding its study and thought. We try out our best thought plan; we watch whether it works. Each new program is thus an experiment. Amid changing conditions we live experimentally, must do so. Education ceases then to be mere acquisition of something handed down. It too becomes experimental. Otherwise it were no adequate preparation for a changing and experimental life.

In a rapidly changing civilization new social problems thus continually arise, with ever new solutions proposed. These new solutions, democracy demands, must be passed upon by the people. Citizens must then be continually studying, criticizing their institutions to improve them. Social education thus must become a lifelong process. This must begin before twenty-one, or the person is sadly handicapped and probably biased against study and intelligent criticism.

The schools must accept the new task. The pupils must learn ever better, with their increasing years, to study and criticize our institutional life in order, intelligently, to help improve it. The alternative is unintelligent indoctrination in the *status quo*.

A NEW SCIENTIFIC OUTLOOK

Recent science presents a second development, probably more subtle, certainly more direct in its attack on a common type of curriculum construction.

The recently discarded Newtonian science outlook analyzed the world ultimately into small material particles. These and their motion constituted all phenomena. Opposed to matter, mind was spectator only, no actual factor. From these scientific method followed: (a) Banish the subjective and personal, it can only disturb. (b) Analyze every complex thing into its "elements"; study these. Whatever is found true of them in separation holds still true in any complex whole.

Education, trying to be "scientific," imitated this method. Though concerned primarily with actual living persons, the extreme advocates tried, in order to be "objective," to banish from the educative process both personality and life. They analyzed life into small separate pieces as impersonal as possible—facts, habits, skills—and studied these in separation, as if they could put them back together and get persons and life. They called these small pieces "educational objectives," and would make a curricu-

lum out of them. They memorized nonsense syllables, as if that would tell them how persons learn in life. Some of the "scientific" were more humane, but their essential logic was still Newtonian—dualistic, atomistic, and analytic.

Leading physicists now reject this old logic of dualism, atoms, and mere analysis. Still more must psychologists and educators reject it. Thus drops the bottom from under this kind of curriculum making.

ORGANISMIC PSYCHOLOGY

The third new development is within psychology itself, especially as related to education.

Until recently our psychology was mainly trying to be "scientific" in the Newtonian sense just discussed. It was atomistic, the small element being the $S \rightarrow R$ bond or the conditioned reflex. It was dualistic, preferring matter to mind: it built itself on physiology (body) and ultimately on chemistry or physics; it sought to limit and banish mind and thinking, preferring impersonal habits to personal thinking as the basis for education. It seized avidly upon "standardized tests" as permitting an education founded on atomistic objectives as interchangeable

as Ford parts, and as allowing, besides, a non-thinking type of evaluation. It tried to make education mechanical, partly to have it more easily controlled from without and above.

In direct contrast with all this, psychology is now moving perceptibly away from physiology, which seems but body, non-thinking and mechanistic, to biology, which gives full sway to all the organism can do; away from atoms like $S \rightarrow R$ or the conditioned reflex to the organism acting as a whole, with thinking, feeling (emotion), impulse, physical moving, glandular action, etc., etc., as aspects (not separable parts) of one organic action. In particular, this better psychology rejects such an analytic procedure as grants the same behavior to small pieces in separation as when in living contexts. Learning is increasingly seen as creative of its own subject matter, not simply an acquisition of what was already there.

Education thus becomes primarily the conscious pursuit of personally felt purposes with ever more adequate self-direction as the goal. The unit of curriculum construction likewise becomes an instance of self-directed purposive living, not as formerly a selected portion of subject-matter-set-out-to-be-learned.

THE SOCIAL-ECONOMIC SITUATION

Last comes the latest and most urgent development, that of our unfortunate social-economic situation.

There was an American dream. As Lincoln phrased it in 1860, any poor but healthy man might "look forward and hope to be a hired hand this year and the next, to work for himself afterwards, and finally to hire men to work for him."

This dream no longer holds. It was founded on self-sufficient farming and adequate free land. To-day there is neither. America is now industrialized. Even the farmers sell to industry and buy from industry the most of what they raise and use. The rest of us are still more dependent on industry.

Equality of opportunity has likewise gone. Lincoln's scheme gave substantial equality: there were enough farms to go around. Industry now denies it. Most of the factory workers must remain factory workers, and so must most of their children. There is not enough room at the top for all, nor are there factories enough to go around.

On the present basis, security also has gone and effectual self-direction. Most of us are slaves to a system which at times refuses to work. As matters

stand we often can do little more for ourselves than hope or fear.

The present bad system, however, is not necessary. Properly planned, our economic system would give security and comfort to all. Life could be not only secure, but far finer and richer. The present system pits man against man to the hurt of all in almost every way. This need not be.

For making changes we wish to hold—and forever so, I hope—to democracy and the way of reason, and not instead choose dictatorship or violence. Democracy as a way of thought and life can yet serve to bring us to peace and comfort, to sweetness and light. But democracy will not so serve us unless the most of us become more intelligent about the situation which now holds us captive.

This situation calls for an educational program, not of propaganda and indoctrination, but to build social intelligence among the people, including as was said above the rising generation. Widespread adult education on the one hand is needed, and on the other a new curriculum and school procedure.

Subsequent chapters will study these new developments and their demands, to see in closer detail what school curriculum and procedure we should henceforth seek.

CHAPTER II

RECENT PSYCHOLOGICAL DEVELOPMENTS

What They Mean for Curriculum Making

The special aim of this chapter is to seek suggestions for curriculum remaking from a study of the present trends in the psychology of the learning-educative process. This area of study is as yet controversial. The effort here made is to find the present most inclusive and satisfactory ways of conceiving the accepted facts regarding behavior and learning.

LEARNING AS AN ASPECT OF INTERACTION OF ORGANISM AND ENVIRONMENT

The general trend seems to be away from a former prevalent psychology of learning which, founding itself on the transmission of what already is, stressed the acquisition of subject-matter-set-out-to-be-learned. Until recently tradition, both lettered and unlettered alike (including theology and even science), accepted the Platonic metaphysics and looked upon knowledge as existing somehow prior

to man's knowing it. The school was accordingly an institution for handing down on authority what was thus known, and learning was the correlative process of accepting dutifully and acquiring faithfully what was set out in the curriculum. The whole process was conceived in static non-creative terms.

The newer psychology grows out of a better biology, the doctrine of evolution, and the fact of modern rapid change. It views life as a process of continual interaction between organism and its environment, and accordingly understands both learning and thinking as instrumental aspects of this process working inherently within it. This conception of learning and thinking, in contrast with the older static view, is essentially creative and dynamic as befits a plastic and changing world.

GOAL-SEEKING THE ESSENCE OF THOUGHT AND ACTION

Life, as interaction between organism and environment, becomes for the newer biology essentially effortful and goal-seeking, actively and even aggressively so. Psychology starts from this beginning and takes on the like character.

Characteristically in life, strain arises between organism and environment. The organism is therein

stirred to act, perhaps to seek, perhaps to shun or avoid. Looked at within, this strain is called urge or want or wish. Looked at without, efforts result, that is, physical movements which tend to satisfy the want and so reduce the strain.

Each such stirring implies a goal peculiar to that stirring. Thus hunger implies food and eating. The efforts may be blind as with digestion: the body struggles but itself knows not why; nor does thinking serve to direct the process. Or the goal may be consciously chosen and the efforts consciously directed to attain it. It is the glory of man that though he begins at birth with blind efforts he may indefinitely increase, directly and indirectly, the conscious control of his experiences. All behavior is thus purposive; it may also be purposeful.

In this goal-seeking behavior the organism acts as a co-operative whole. If beginning efforts fail, other and different ones are continually tried, even with low-type organisms, until success is attained or the organism itself accepts failure. The parts and resources of the organism thus act co-operatively together toward the common organic end and goal. This co-operation is seen very clearly in the fact of organic "set." To each significant stirring, as fighting or food-seeking, belongs its peculiar "set," in

which the various organic resources get co-operatively ready for the work at hand. Thus a cat's "set" when it is about to pounce on a bird is markedly different from its "set" to fight off a dog. Even the very hairs on the cat's tail tell which "set" is acting. For humans also the organism acts as a whole. Seeing, smelling, thinking, feeling, impulse, physical movement, glandular actions, etc.—all work co-operatively together to advance the common cause. Men likewise experience "set," even obviously so to the discerning eye.

Our feelings, as part of the whole response, differ for the different phases of the stirring and goal-seeking. Feelings partly accompany, telling thus the story as it develops: we wish, we hope, we fear, we exult, we are discouraged, we feel more determined, we are now content. Also the same feelings may increase or decrease the efforts we put forth. This latter fact is why the emotions are so important.

Thinking is for man the most significant aspect of the total organic action. When the situation is difficult and one is in doubt how to deal with it, he will study it the more closely. For thinking, as Professor Dewey has so well said, is the only way to deal with the doubtful as such. With familiar situations, habit, brought over from the past, may suffice; but

with uncertain and shifting situations, thinking alone is competent to deal. As thinking judges and decides, it will direct habit and skill how to take hold. Thus in a changing world behavior patterns or ideas made in advance do not suffice. The behavior patterns we would then use must be contrived in the situation itself for use there. Old patterns may supply suggestions and materials for readaptation, but the actual pattern to use—that must be contrived by thinking to fit the situation at hand.

This newer psychology is thus essentially different from the older. Goal-seeking is its chief characteristic, and for modern man this is increasingly thought-directed. Life, wants; efforts, feelings, thinking, glandular action, habits, knowledge, values—all get their defining conceptions in terms of a dynamic process in which the organism, acting as a unified co-operative whole, pursues ends which it itself has set up. The older psychology was not so. It tried to reduce thinking and valuing and the pursuit of purposes to lower and mechanistic processes. It tried to direct education along similarly mechanical lines. That mechanistic psychology is going out. The incoming psychology counts that goals, varying efforts, success or failure, are the very stuff of life wherever found. Education must ex-

pect the learner always to be thus active and goal-seeking. Purposeful activity is the very essence of thoughtful living; it must become as well the essence of intelligent learning.

STUDY AND LEARNING ESSENTIALLY PURPOSIVE

In this purposive conception of life and psychology, learning and the educative process also take on an inherent purposive character.

This gives learning a new orientation. In a thoroughly familiar situation the organism can respond with patterns already on hand, available from the past. But if the situation is sufficiently new and difficult, old patterns will not avail. The organism then will, if able, contrive what is to it a new response pattern, readapting old patterns, to be sure, but adding new elements. Such a new contriving is for that organism a creative act. This creative phase the older psychology largely ignored. For it the creating had already been done, or would be done by the teacher. The aim of its teaching was to hand on, or down, what was already known. It accordingly stressed practice or drill. So it ignored or belittled the fact that the learner must in any case first create for himself the to-him-new-pattern before he could

even begin to practice it. Anyone who has tried to learn a new stroke in tennis or golf or to sound for the first time ü in German, knows that contriving the movement at all is half and more of the battle. The first phase of learning is thus one's personal contriving or creating the new response pattern.

But contriving is not all. A person facing a difficult situation may contrive and try out one new response pattern after another. Some will fail outright and be rejected accordingly. Others, more promising, will be remade to try again until finally one pattern may be accepted as meeting satisfactorily the needs of the situation. This fact of acceptance now does an extraordinary thing—a miracle we should call it, were it not so familiar. The pattern so accepted to act on henceforth becomes *by and through the fact of acceptance* incorporated into the person's very organism along with and among all the rest that makes up his character. Henceforth this new is part and parcel of him, of his very self.

Learning has thus two phases: the one creative, in which the learner contrives what is to him a new behavior pattern, more than one if necessary; the other fixing (or incorporative), in which the one pattern accepted for subsequent use becomes by that very fact incorporated into the organism of the

learner as an integral part of his own being and self.

LEARNING A CONTINUAL REBUILDING OF THE SELF

Each such new learning in making its contribution rebuilds in so far the very structure of the organism. For in this process the new and old are welded together, each rebuilding the other, more or less, as the new is incorporated with the old. The self is thus always in process of continual rebuilding. If in its learning the self accepts the higher and finer of the alternatives before it, a still higher and finer self is therein built. If a low choice is made, a lower self is by so much the result. It is what the self accepts and how thoroughly it accepts that counts. Education becomes thus the process of helping the self to rebuild itself to ever higher and finer levels by helping it to think and choose better than otherwise it would. Learning, including as it does the whole organism, is thus the process by which each one builds his growing self by the choices that he makes.

The new psychology thus carries its purposive goal-seeking character into the very heart of the learning and educative process. Study and learning

are themselves part of the effort to face a new situation in the best possible way. The learner first gives his character to the situation before him by the way in which he constructively understands it and reacts to it. He next must create the appropriate way of meeting the situation, seeking materials and means for thought and action from all pertinent sources. He may make and try various plans. He finally learns only and exactly what he accepts as meeting the case for him. The more wholeheartedly he accepts, the stronger the learning. What he accepts remakes him. If it is fine, he grows finer. Learning is thus by its very nature instrumental to the remaking of both environment and the organism. In both respects the educative process is essentially purposive and creative.

MANY VARIED LEARNINGS ALWAYS IN PROCESS

It was brought out above that the organism acts as a whole. It follows that the learning results extend to all parts and aspects of the organism included in the learning response. Each one is thus always carrying on many learnings at once, as the different related aspects sum themselves up during any extended experience. The successive knowledge

aspects of successive experiences join together to form an interrelated knowledge whole. The related feeling aspects form perhaps a distinct emotional attitude. Related skill aspects build technique. And always are these varied learnings simultaneously in process.

Take attitudes, for example. When I think of Hitlerism I find myself saying, in effect if not words, "Away with it. I hate it." An attitude thus combines impulse with emotion and thought. We are then engaged in building attitudes toward all the things we think about to pass judgment upon. So Mary in her algebra lesson may think of the teacher to judge him: "He can't explain it. I do not like him." Or of factoring, "I can't do it. I don't like it. I don't see any use for it anyhow." And similarly, favorably or unfavorably, upon algebra in general, her own ability in algebra, her respect for herself in mathematics, John's ability in mathematics, Susie's simpering ways, her own drawings (which she can do), her father (who encourages her drawing), Henry (whose eyes have a pointed way of meeting hers), Jane (who also looks at Henry), the dance next Friday evening, the dress she will wear, the undue length of the algebra period—an attitude toward each.

In this way the whole child is always learning in all the parts and aspects of his being. Each such learning is separate only for thought. In fact, all are always joined more or less together. We as teachers may think first and most of the algebra or the history, as if the pupils were learning only that and as if it counted somehow most. But much more than algebra is being learned. Usually, so we have to admit, it is these other things—the concomitant or attendant learnings—that count for most in the child's life. It is out of the resulting attitudes that the child's future choices will mostly be made.

CHILD VERSUS SUBJECT MATTER

The new curriculum must then put first things first. The child must for us come before subject matter as such. This is the everlasting and final condemnation of the old curriculum. It put subject matter first and it bent—or if need be, broke—the child to fit that. And the only way to put the child first is to put first the child's present living: that it be active and fine; that the pupils have the opportunity to face life itself (at their age and condition) as they themselves count life, and thus facing life situations learn to deal with them as constructively as we can help them to do. Subject matter—if any

reader be concerned for it—will be called this way better into play than is usual now, and more of it, but probably not the precise subject matter of the customary school and most certainly not in the usual order.

THE UNIT ELEMENT OF CURRICULUM MAKING

From all the foregoing we come to ask: What is the lesson for curriculum making? In particular how shall we conceive the unit element out of which the curriculum is built?

The older way was to think of the curriculum as made up of subjects, and each subject as divided into lessons. The unit element of curriculum making was thus a more or less unified piece of subject matter set before a class for acquisition. School was, in this way, a preparation for life. True the child was living while he was a pupil, but the school was concerned with the present primarily as a period of acquisition, in anticipation mainly of a future when the material so acquired would be used. It is also true that latterly many good teachers have tried so to teach their school subjects that the children would grow now. But the curriculum—and generally also the interest of the teacher—was first and officially directed to the subject matter. If either had to yield,

it was the pupil and not the curriculum. And this is the test: Which in the last analysis must yield, pupil or curriculum?

This older curriculum was supported by a psychology that stressed acquisition, even drill, and minimized creative thinking. It even doubted that most people can think anyhow. Learning too was largely a matter of repetition. "Motivation" (odious word, which starts with subject matter that this may get mastered) was to make the repetition palatable.

The newer education finds its unit in terms of the newer psychology which starts with life as the pursuit of ends or purposes. A desirable educative experience is present then wherever a person faces a challenging situation and undertakes responsibly to deal with it. Such an experience will have in it elements new to him. He must deal creatively with them. He will learn, all over and all through, as he puts himself wholeheartedly into what he does. Our part is to guide our pupils so that they become ever better self-directing in facing life's situations. This is the conception from the recent psychology which must remake the curriculum. The good elementary school has already begun. The secondary school must follow.

CHAPTER III

THE SOCIAL SITUATION AND THE CURRICULUM

The aim of this chapter is to study our social situation as it bears upon and conditions the work of the school. The next chapter will ask what the curriculum should accordingly be in order to meet these social conditions.

We have already seen how our rapid social change requires thinking, and not mere habit, to deal with it. And also how unequal change has produced cultural lags which upset our former cultural balance, so that we now need further changes in order to make the culture work, part with part, as an effectual whole together. These things require that our citizens shall learn to criticize and judge our various institutions so as to bring the lagging parts up abreast of the rest.

Specifically as to the present social situation: Our sense of economic security is greatly shaken, the economic system having forfeited our confidence. Our former equality of opportunity no longer holds; the few may "rise" but not all together or on equal

terms. This older notion of equality of opportunity is impossible with factories and large corporations; a revised conception is necessary. Finally, men are in business so pitted competitively against each other as to bring widespread evil results both to individual character and to the finer aspects of social life. As against these evil conditions, America could, if only it would, so plan and distribute as to bring security and comfort to all, while it lessened, if it did not remove, inequality and the competitive degradation of life and character. Only vested selfishness and general inertia of thinking, it appears, prevent us from undertaking thoroughgoing social reconstruction.

As we consider this situation and the need for change, we propose to hold firmly to democracy. Indeed, we wish the new arrangements largely in order to insure a truer democracy; and all the new arrangements must likewise go forward under democratic control. If this democratic control is to continue and be adequate to the demands, the people must be adequate to the new vision with its new duties, and the school finds therein a greater task. Meanwhile we who deal with schools must understand our society and our culture the better in order that education may the more surely serve.

SELF AND SOCIETY

Certain fundamental social relationships need new study. Our fathers thought of men as individuals first and as forming society afterwards. Individual liberty was thus a kind of absolute, with social arrangements a necessary evil. Certain moderns reverse the order, make the state absolute, and deny democracy. What then shall we say? How shall we understand the relationship of the individual to his institutional life?

Which comes first in time, the individual or the institutions, and how are they related?

It is always true that the human individual is born into some prior existing cultural group. As he grows up, he will (if normal) participate more and more fully in the life going on about him. That is, he must co-operate with those conducting that life and share with them their food, their language, their implements of living. He thus accepts their customs and largely their dominating ideas and attitudes. In effect he is built into the model of that particular group culture. The group and its culture are prior to the individual. It must be so.

At once two questions arise. First, is this molding from without so iron-bound as to be precisely fixed

in advance and inevitable? If so, what does individuality mean? And liberty? And how is progress possible? Second, how is this inevitable acceptance by the child of his surrounding culture patterns compatible with the active and creative conception of conduct and learning discussed in the preceding chapters?

Let us take first the question of reconciling creative learning with the cultural molding of the individual. Can both be true? Suppose we begin with language. Wherein is a child among us creative when he is learning to talk? Has not his language been already created for him? We must here clearly distinguish psychological creation as an individual affair from sociological creation which adds to or otherwise changes the group culture. In the preceding chapter we were concerned to see that the learning process is one in which the individual is actually creative as he contrives how to meet a novel situation. Now we are asking whether this act of creating is still claimed when the model which he is finally to accept is fixed beforehand. The answer is yes. Psychologically, the learner himself still creates the response that he is to make.

Consider the actual beginning of language. When the child is sufficiently mature he begins spontane-

ously to babble. Some one of these sounds will approximate *ma ma*. Whereupon all about him will give warm approval of his achievement. He accepts the approval and will in time learn to say *ma ma* upon request. Even here his creative part is clearly present. Until he is able to achieve the original babbling *ma ma* and later the *ma ma* response to the request, he has not learned "to say *ma ma*." This prior necessity that he himself achieve these two things is exactly what is meant by saying that he contrives or creates the forms that he learns. We may go further. This child will at first apply his newly achieved *ma ma* to anyone who happens along. This will not long meet the social demand. He is now called upon to make the distinction that *ma ma* belongs solely and exclusively to one particular member of the social group. Earlier he could not conceive this distinction; now in time he can. This distinction-achieving belongs perhaps "higher" up on the imitation-creation scale than either of the earlier two. Note here that until he creates for himself the distinction, it simply does not exist for him. Nothing is more obvious to students in this field than the different abilities of people to achieve such distinctions. Children thus learn their language at differing rates, to differing degrees of refinement.

Two things here emerge together. The more distinctions there are embodied in the group tongue and thought, the more of such distinctions the young, other things being equal, will learn. Also, the more creative ability any one child has, the more quickly and surely, other things being equal, will he acquire the distinctions used about him. Those who grow up in cultivated homes will on the whole use more and finer distinctions than will others. There is then no necessary contradiction between psychologic creative learning, on the one hand, and the fullest appropriation of the race culture, on the other. The more complementary the two processes become, the better each becomes.

And now as to whether this culture-molding of the child is so precise and inevitable a process as to deny any validity to our notions of liberty, individuality, and cultural progress. The answer is implicit in the preceding discussion.

Learning the group culture is not a mere accepting of what already is. Each individual creates his own response. True enough in very simple matters appreciable variations may be impossible or unacceptable; but in more complex matters and particularly in a changing and uncertain culture the responses will vary appreciably from individual to

individual. It is, in fact, true of cultural history that these very conceptions of individuality, personal liberty, and conscious social progress are relatively late in developing and seem themselves dependent upon an accumulation within the culture of complex and contending notions as to man and government and duty. It is thus in the individual response to varied and conflicting demands that individuality is born and liberty and progress get their meanings.

We seem then authorized to conclude that in a very primitive and simple culture the process of cultural transmission may so precisely mold the child as to shut out notions of personal liberty or of conscious improvement of social patterns and consequently any clear ideal of individuality. But where the culture is complex and contains discordant elements, personal thinking and choice become inevitable and there arise consequently as capital achievements of civilization the conceptions and ideals of personal liberty, of individuality, and of the conscious improvement of society. The more thoroughly the group culture accepts these as its ideals, the less fatalistically will its individuals be bound to any prior existing model. Creating in the sociological as well as the psychological sense is then increasingly achieved.

MUTUALITY OF CONCEPTIONS OF SELF AND OTHER

One phase of the foregoing calls for special consideration. It appears true that selfhood is an individual achievement, not a mere matter of being born a human, and that the achieving demands a social milieu. The very fact of selfhood involves and implies one's own conception of himself as an abiding unity, a self, in contrast with other like selves or persons. These contrasting conceptions of self and others emerge simultaneously, each helping the other into fuller consciousness; and the mutuality of the process is perhaps unending. What one knows of one's self receives corroborating recognition from seeing it in others; and vice versa, what one knows of others gets clearer definition from finding it also in one's self. So each one learns to consider others' rights and feelings; so one learns to curb and shape himself in respect for the rights and feelings of others. Only as one has achieved this *ego-socius* conception of self and others is he able to take his proper place in social life. Only on this basis can he respect others as persons. Any adequate social-moral thinking depends upon the prior adequate achieving of these mutual self-and-other conceptions. Without it

we should remain brutes, incapable of morality and refined social intercourse.

It is but a repetition of the earlier argument to point out that since the self is born of its conception of others, the character of the achieved self will thus be a function of the surrounding social life, built on its dominant model. Thus again is it true that the very self, the innermost citadel of selfhood, is socially built and conditioned.

We are then able to return an emphatic answer to the questions asked at the outset. Society is prior to any individual. The theory discussed by Hobbes, Locke, and Rousseau, that humans held natural rights to liberty, etc., prior to coming together in society, is a chimera. Men have become men in and through the group and the culture within which they are born and brought up. To contrast and oppose "the individual" and his needs to "society" and its needs is an impossible artificiality.

THE SERVICE NATURE OF INSTITUTIONS

Pursuing this further we can understand better the nature of institutions and see how they must serve the individuals using them. The fact of co-operation is here basic. To paraphrase Aristotle, as co-operation began to make life possible, so it exists

to make life good. Civilization actually depends on co-operation.

Where men do in fact co-operate, each must understand what the others are doing and fit his movements into the common process. There must then be common purposes, communication or exchange of common understandings, and common ways of acting together. It is the aggregate body of such common aims, common language, and common ways of co-operating with reference to common ends that constitutes the customs and institutions of any group.

When the culture of any group is thoroughly unified, the young are molded unquestioningly to its model and men use their institutions with no more questioning criticism than we question the pressure of the atmosphere or the beating of the healthy heart. But when varying aims and differing standards make contradictory demands upon us, we are compelled to question. Amid such conflicting demands several conceptions emerge simultaneously: the function of institutions to foster life; the ideal of the good and happy life; the desired character of men to foster better institutions and the happier and finer living. When knowledge accumulates, especially in the history and comparative study of cul-

tures, the idea almost inevitably arises that institutional forms may be consciously remade the better to serve human living. Clearly then institutions are not absolute to control men, but exist to make life better.

EDUCATIONAL IMPLICATIONS

Any intelligently managed society, especially in our modern times of rapid change and divided culture, must make conscious provision on the one hand for the study of its institutions that these may when necessary be improved, on the other for the education of its citizens that they may be intelligent in such matters and disposed to seek and foster desirable changes. A public system of education for a democracy exists, largely at least, to serve just these two ends: to foster (especially through higher education) the criticism of our institutional life, and to cultivate an intelligent citizenship to act accordingly. Any effort to prevent or limit such study and criticism as to possible desirable changes is exactly an effort to foster social blindness and stupidity.

Also it becomes the peculiar obligation of government, existing as it does to serve the people, to support and foster such critical study of the institutional life through an adequate system of education, not only in schools and universities for the children and

adolescents, but also, we are now coming to see, through a system of adult education for all the citizens. And these things must be so, because in a rapidly changing society there arises a continual stream of novel social and political problems which must be studied as and when they arise.

To study life and how to enrich it, to study our customs and institutions and how to improve them, to educate youth so that they may grow up thus socially capable and disposed—these things constitute the aims of any proper educational system.

CHAPTER IV

THE CURRICULUM AS A PROCESS OF LIVING

Some who still think of the curriculum as specified content will be troubled at seeing it here called a process of living. This shift from the static outlook of content to the dynamic outlook of process is but part of a very inclusive modern tendency permeating the development of thought for now nearly three centuries. It is the fault, not the virtue, of education that it has adhered so tenaciously to static conceptions. The shift to the dynamic is long overdue.

We begin accordingly with life as an on-going and developing interaction between the organism and its environment. For us here there are two sides to the process: on the one hand, a child growing up; on the other, the surrounding group and cultural life amid which the child thus develops and in which he is increasingly to share. We who are interested from both angles wish, as regards the child, that as he lives and grows he may live fully and happily; and, in behalf of the group, that he may ever share

more responsibly and helpfully in carrying forward the common social life.

The curriculum becomes then all of the child's life for which the school carries responsibility. In our democratic society certain aims immediately emerge for guiding the work of the school. We aim that our children, as they grow up, shall increase in intelligent self-direction and in richness of personality. We wish them to share ever more fully in the group life on a basis of ever more adequate and responsible consideration of all concerned. As regards the culture of the surrounding life, our youth must (as we saw in the preceding chapter) learn it as they share ever more fully in that life. They must, however, so learn this culture as, on the one hand, to escape ever better from its mere domination and, on the other hand, to be ever more able and disposed to share in the continuous process of re-making it as the need shall continually arise. The task of the curriculum is to help each child so to live and grow that these several aims may be progressively realized.

A NEW TYPE OF CURRICULUM UNIT

From our organismic conception the unit element of such a curriculum becomes, not a specified lesson

of subject matter to be learned, as was formerly held, but a person facing an actual situation. That is, the unit is an actual instance of child living—this, for the teacher, to be educatively conceived and educatively directed. That this conception demands the thoroughgoing reconstruction of any remaining traditional type of school practice is here consciously intended. It is hardly possible to over-emphasize the radical character of the transformation sought. Many elementary schools, especially for the early years, have already gone far with this transformation. Few secondary schools, however, have, so far as this writer knows, been able as yet to see beyond specified separate subjects. Most still think in the old terms.

Let us examine more closely how the educative process is carried on in such a curriculum unit; more specifically, how study and learning go on when a child faces an actual situation to deal effectively with it. The effort at this point is to see the educative process going on in and through an instance of actual child-directed living.

(1) Suppose a child faces a situation. First of all there is in him that which makes this a situation for him, and second there is in the environment something that so stirs him that he is moved to act. Only

as these things happen together does a child face an actual situation.

So stated, many will properly see the old doctrine of interest presented in new dress. The aim here is to reaffirm that doctrine. By interest in any full or desirable sense we mean that the child as he faces an actual situation is so unified within that he is, as we say, centered on the thing at hand. Positively he is stirred to act zealously; negatively he is not so divided within as to be unable or unwilling to give himself intently and determinedly to what he is doing. Admittedly there are degrees of such interest; we wish it as wholehearted as possible. Some will at once ask, "But suppose the children are not interested?" For answer we say that unless children are ill or have been miseducated, they are eager to be actively engaged. Their active interests may not of course be what we should prefer. In such case we have to do the best we can. But we must start where the child's interests now are, help him to choose the best among them, and then help these to grow into something better. Many teachers, wilfully, will not have it so. They still insist on beginning with subject matter. Their danger is that by suppressing the child they develop the bad instead of the better. Children used to the old dic-

tation-of-subject-matter-from-above, like pathologic cases everywhere, require careful treatment; but tact and wisdom along better lines will usually pay in increased dividends.

(2) Facing thus an actual life situation, the second step is to analyze it, partly to set up or clarify ends, partly to get materials for the planning that comes next.

(3) The third step is to make one or more plans and choose from among them, for dealing with the situation. In a developing situation the plan will be in process of making from step to step as the situation develops. Planning is clearly an imaginative and creative step, but the imagination is checked and molded by the hard facts of the situation.

(4) Then comes the step of putting the plan into operation, watching meanwhile to see how it works, so that if need arise revision may be made.

(5) If the plan succeeds, a final stage is the backward look to see what has been done and how it might be done better another time.

We are to think of the foregoing not so much as separate chronological steps, though they may be so, but rather logical phases that enter into any instance of dealing with an actual situation, whether it be building a campfire or writing a play. The thing

most to be valued is how the child, or the group, is active, dynamic, thinking, feeling, pushing ahead, moving forward physically—all these are taking place at each step and phase. And note that the process is self-directed and in general contains its own inherent testing. The children run it and learn by the practice. The campfire has to burn. The play has to go as a play. The children have to learn as they go.

HOW STUDY AND LEARNING ENTER

It is easy to see that study enters at each of these stages, most definitely perhaps after the first. In fact, study takes on new meaning when, as here, we see it as the effort to grapple intelligently with an on-going process that may stall or run away from us if we do not give to it the best thought of which we are capable.

Learning also enters at every stage and phase whenever we undertake to deal with a developing process. Life presents continual novelty. In relation to each such novel element and moment two things result: (1) in each succeeding new phase the mind has to do new and creative thinking, slight though it often may be; and (2) in each such phase the organism as-a-whole has to choose, either to ac-

cept or to reject, what it will do. These two elements exactly constitute learning, as we have seen.

In learning, then, the organism first contrives (creates) for itself something new, a new response. It may be a new idea, a new feeling in this relation, a new fact in relation, a new move in such a connection. Of course, neither thinking nor feeling nor moving ever goes simply alone. Always the other aspects also of the whole organism are involved in spite of our choosing to name one for especial consideration. Then comes the second aspect or phase of learning. In a novelly developing experience continual choices are necessary. Rival possible significances present themselves, rival hypotheses as to what are the facts, rival tendencies toward feeling or acting. We must choose. We accept one (at least to act on), we reject the others (at least for the time). Then occurs the miracle earlier referred to: whatever one accepts to act on is *by that very fact* built into one's very being, and there it abides on substantially equal terms with what was therein before-times included. Learning has taken place. The creation (first phase) and the incorporation (second phase) together constitute learning.

And all that was consciously weighed in making the choice is learned in the sense and degree that

it was accepted or rejected, each along with the peculiar limitations and emphases that entered into the decision. And the decision there made is somehow registered in the nervous system to determine, unless later experience shall change the verdict, one's subsequent attitude towards using it and towards the selective conditions on which it will be used. And in this verdict thinking, feeling, impulse, bodily action, and all the rest concur. The learning is effected by, and is registered in, the whole of the organism.

These considerations show both the practical and the moral advantage of learning in situations that do in fact connect thinking properly with doing. What is thus learned, whether of idea or distinction, was accepted in and for action and so is learned (stored up) also for future action. To keep thought and action joined thus effectually together—the thought guiding the act and the act testing the thought—is precisely the way to build effectual character, both moral and prudential or practical. It is from such considerations that the proponents of this general position start with *a person facing a situation* and base their procedure on *acting on thinking*.

So far we have followed the learner side of this curriculum as living-and-learning process. It is now time to consider the teacher-and-guidance side.

THE PART OF TEACHING AND GUIDANCE

Some critics of "progressive education" profess fear that there will be motion and commotion and little more, that in particular there will be little satisfactory advance in all those desirable social and moral elements set forth earlier in this article. We accordingly must ask what if any provision there is, in the process of learning just outlined, whether inherent in the process or otherwise, for steering that process toward fruitful and constructive outcomes.

First of all there is a certain guidance, not of itself always sufficient but still highly effective, that comes from the inherent operation of the surrounding cultural life. The child (if normal) must live in that life, and this entails much actual learning. He cannot take part in that life on self-satisfying terms unless, for example, he learns to talk, both to understand and to make himself understood. Similarly, he will, to be respectable in the eyes of his fellows, learn to manage the ordinary tools and forms of life. The urge to win approval will make many work assiduously to excel. This creates standards of respectability which the less ambitious will ignore only at the peril of their social standing. Few countries surpass this one in the power that society thus exerts

over its members, both young and old, to mold them to its model. The result is not an unmixed good, but the powerful effect is undeniable.

Parental care of course undertakes to guide this inherent process. Certain lines of conduct are forbidden and certain favorable opportunities are opened up—both with intent to guard against undesirable tendencies. Properly used such care is clearly beneficial; but we must not deceive ourselves. It is the inherent working of the process that most and best educates. Our part is to help steer the inherent process along somewhat better lines.

The teacher stands *in loco parentis*, but takes a more active part. And the newer teacher is far more active, creatively and actually, than was the old teacher, though the effort is likely to be more indirect. The old teacher had no fear of imposing his ideas; that was what he was there to do. The newer teacher is trying always to build up a process more adequately creative and self-directing from within. He therefore does fear lest he impose hurtfully. He works always that his pupils may grow as best possible in *acting on thinking*.

Moreover, he must think always of *the whole child* which is always involved. The older teacher thought first of his subject matter, that it get learned.

He would accordingly bend, if need be, and even break the spirit of the pupil in order to get the assigned tasks learned. The good teacher of the newer view well understands how it is the process itself, especially as socially conditioned, that educates; and he makes every effort to get and keep the process going on such terms as will cause it to gain in ever more certain and intelligently-directed momentum. This is his chief aim. That attained, the rest follows.

Such a teacher, while he pursues this chief aim, is much concerned with each succeeding new venture which his class undertakes; concerned that the venture reach fruitfully into new territory, and not simply repeat ground already covered; concerned that, in relation to what has gone before, the long-run program be sufficiently varied as it develops to care for all the significant sides and aspects of life suitable for pupils of this age; concerned that the new project and venture be sufficiently difficult to stretch out his group to their reasonable best, yet not too difficult for reasonable success. And he is further concerned as this project-venture is pursued through each of its unfolding stages; concerned that each pupil find a task suited to his peculiar needs; concerned that all think through the many signifi-

cant thought or action problems that arise, always keeping thought and action properly joined together. These things constitute the teacher's secondary aims.

How subject matter is adequately cared for, and an effectual consecutiveness of learning results maintained; how the more foreseeable needs of such things as reading, writing, arithmetic, and the like, are met; and how at the same time the pupils learn to face an uncertain and developing future—these are matters that will be discussed in a separate chapter.

CHAPTER V

SAFEGUARDING CURRICULUM RESULTS

In the preceding chapter the curriculum was considered as a process of living, and certain superiorities were claimed for the learning process therein provided. There are, however, those among us—a diminishing number, it appears—who refuse to accept the line of argument there presented. They fear, for example, that certain definitely foreseeable needs as reading, writing, spelling, arithmetic—to mention only the more elementary—may suffer from what looks to them like a haphazard process. And they are further apprehensive that certain old-fashioned but still necessary values, as thoroughness, continuity of learning, and logical organization, will suffer. It is the purpose of this chapter to consider the values thus judged to be in jeopardy and to ask how the curriculum as a living process proposes to take care of them.

It is in part review of preceding chapters to point out that the life process itself is far from haphazard; that on the contrary there is in it very considerable inherent guidance. The very process of pursuing

ends, in the degree that it is zealously done, brings inherently an education both in the knowledge of the thing pursued and in the effectual pursuit of similar things. The phrases, "learn by experience," "learn to do by doing," are but popular testimony to easily observed facts in support of these claims. But, further, the surrounding social group adds its selective and reinforcing influence. Whoever grows up in a group absorbs in greatest measure the dominant attitudes and customs of the group. And probably nowhere else is this influence stronger than in this country. Any parent knows how weighty with our young people are the approval and disapproval of their fellows. However, powerful as is this inherent guidance, few if any would claim that it is sufficient. In fact, schools exist precisely because it does not suffice. The question then raised by the critics-opponents of the life-process curriculum is exactly at this point: whether this type of curriculum will in fact take adequate care of the necessary learning. In brief, to use their words, will all desirable subject matter be taught? Will the necessary thoroughness and organization be attained?

The answers herein returned to these questions are that we expect to get more subject matter, better thoroughness and organization, and besides to build

better minds, richer and finer interests, finer personality adjustment, and better moral character. The question here, however, is primarily as to subject matter, thoroughness, and organization.

ACTIVITIES TEACHER-GUIDED AND PUPIL-PURSUED

The curriculum procedure herein contemplated is a succession of pupil-pursued activities, chosen and directed—at least predominantly—by the class-and-teacher group. The whole is to go forward under the control of the teacher, who may if need arise either veto a proposal or direct positive action. But the teacher will look upon these interpositions rather as emergency measures. Self-direction on the pupils' part, that it may be ever more adequate, will be the teacher's chief aim; and for this, of course, responsible practice in acting on thinking is necessary. As means to this self-direction a secondary aim will be to build up in the class (and also co-operatively in the school and as far as possible still further in the community) an ever better internally directed group-life process, a true public spirit, which through its ever stronger and more discriminating momentum will in turn react on the constituent members of the group, partly to stimulate them to increasing sensi-

tivity to finer values, partly to hold them to ever higher standards of thought and action. The question thus becomes whether this type of teacher-directed procedure will suffice.

HOW SUBJECT MATTER WILL BE SO ACQUIRED AND ORGANIZED

Let us ask first how a succession of such teacher-guided, pupil-pursued activities will serve to acquire and organize, among other desirable learnings, the subject matter in which our critic-opponents are chiefly interested. Suppose, to simplify the discussion, we ask how the pupil-student acquires and organizes knowledge regarding what will later in his life be called government and political theory.

When the child comes to school he has already begun at home to experience government and to learn already more or less adequately how to fit his life at this stage into the family regime. Law and order have for him already begun. Already certain nascent conceptions have been acquired of personal rights, of simple self-restraints, of ought and obligation with reference to others. Also some sense of authority and of obedience thereto have been built up. All of these constitute beginnings along the line under consideration.

Now every period of each day will bring its call to use some of this previous learning in application, sometimes to quite familiar situations, at other times to quite new situations. The former will call not so much for new learnings as for consolidation and exercise of the old, the "practice" which is perhaps to make "perfect." The novel situations call for more active thinking, for the getting perhaps of new concepts, more often for the revising of old ones. This new must be "thought through" and (in our kind of school) acted upon, thus consolidating new and old and joining this new compound of old and new thinking with habits of acting. In all of this the teacher is there to help the child do better than otherwise he would in sensing the situation, thinking it through (on his level, of course), and acting upon it.

In such matters the teacher possesses, to a far more adequate degree than do these young children, whatever the culture has to offer to the activity at hand. She must know the children and help them, at their several levels, to call to their aid anything from the culture appropriate for them now to use. If she underdoes her guidance part, the pupils will fail to grow as best they might in acquiring the culture and accordingly in enriching their lives. If the

teacher overdoes her guidance (as did the older school), the pupils will fail to practice, and accordingly to grow in, self-direction. The test of the teacher's part is the totality of learning that results to the children. And the results will on the whole be wholesome to the degree that the situation itself—and not the teacher—calls out and tests the learning. For then the learning is joined fruitfully for the pupils with the meaningful cues of the situation rather than with the teacher's word.

Note here the cumulative effect in whatever line may be under consideration, government or arithmetic or anything else. Each situation effectually met will utilize past experience and so will consolidate that past learning with the present learning in and for action. Each new element considered in the situation at hand calls for its positive addition to what the child knows or does, and this must be incorporated with all the pertinent old (else learning has not well taken place) so as to bring all together up to date for use (because learning is acceptance and incorporation for use). It is this continual incorporation of new with old for use that makes continual effectual organization of all pertinent past experience and keeps it continually up to date.

The conception of continual organizing in the preceding paragraph requires emphasis. The older view seems to have been that subject matter had to be presented to the child in an already organized form, else he would never get it organized in his own mind. This is almost totally erroneous and false. Each one in largest measure makes his own organization-for-use. The purpose and test of organization is to have the material so organized as to be ready for use when the time comes. This means learning each item in many meaning connections, so that, when the meanings of a situation are sensed, these by their meaningful connections already previously built in one's own past experience will call up for thought and action whatever of that past experience is pertinent to the matter at hand. Organization then is effected by thinking things together for use, particularly the kind of thinking that calls for abstracting and generalizing for further use. We as teachers then can help our pupils and students form better thought-organizations by helping them to think better about the various matters at hand, think more numerous connections, make better generalizations.

Thinking for use—ever better thinking for ever wider use—this is the key to organization. Orderly

arrangement within such thinking is always a possibility, but the main means for effecting this is the thinking itself, much thinking, many connections well thought, generalization, orderly thinking for present understanding and later use. And with each new learning situation the thinking done in connection with it will automatically—by the inherent fact of learning—be organized together with the pertinent thinkings brought over from the past and called to mind by the effort to deal with this situation. Thus it is that organization is a cumulative affair inherent in intelligent learning based on the pursuit of ends.

Two things thus appear as necessary if the pupils are to acquire and organize adequately: (1) they must in their succession of learning-activity-experiences meet in the aggregate such a variety of situations as will take reasonable care of the varied significant aspects of life; and (2) they must think these through so as to get from them their reasonable quotas of organized thought. Both of these depend largely on the teachers, especially as these study and co-operate together with reference to their growing pupils during the successive years of school life. And for this the teachers must have both insight and skill. This needed insight calls for further comment.

WHAT TEACHER-GUIDANCE INVOLVES

The successive activity-experiences which make up our curriculum are to be chosen by the class-teacher group; the teacher is the expert, but the class will learn better how to choose as they think and act responsibly. Each succeeding activity-experience must lead into new territory, else learning does not advance. It must be challenging, else the work is badly done. It must be hard enough to call out the best in the pupils, but not so hard as to bring too many failures. Moreover the succession of activities must be sufficiently varied in type. Now the teacher's part in helping to direct, first, the choice of the next activity and, second, the enterprise-experience itself, can go forward intelligently only as the teacher has organized—co-operatively with the other teachers, for the year-by-year work must be co-operative—a sufficient aggregate of life-and-education values by means of which to guide each step and stage of the developing process. It is in terms of relative potential values that the teacher will help steer the process of choosing the next enterprise-experience. It is in terms of values potentially to be got that the teacher will help the pupils think through each phase of the developing activity-experience. The teacher

will also know sources of information and help, such as books, articles, museums to be visited, etc. Still further the teacher will know special dangers to be avoided, special weaknesses likely to develop; and also whatever of tests and measures may wisely be used in diagnosis or otherwise.

If we speak of values, we stress the need of an adequate philosophy which one is forever building and improving. This must be built, as far as possible, co-operatively; for only on this basis can the school work successfully as a unity. Values, knowledge of source materials, teaching and testing helps—all of these go together to make up a teacher's equipment. It is on them as they have been adequately built and are skilfully used that we must rely to help our pupils go forward adequately.

How well this type of procedure works in comparison with the older is well brought out for arithmetic in the series of articles that Superintendent Benezet of Manchester, New Hampshire, has recently written. Pupils who have not been taught at all in arithmetic, so far as old-fashioned assignments go, come up to the sixth grade better prepared than those who have had the ordinary textbook treatment. It is an excellent illustration of the comparative failure of the old and success of the new. Probably

most school people count arithmetic the most difficult of the "school subjects." If arithmetic can thus be taught without assignments up to beginning sixth-grade standards, there seems no reason to fear for the rest, except perhaps for beginning reading, where more definite procedures seem helpful. And experience of innumerable schools increasingly bears out these contentions.

The proponents of this newer type of curriculum are not then indifferent to subject matter; they need it and expect to use it, more of it in fact than our critics, but they get it, as has been many times herein said, in a different way. (In order for the life process to grow in the desired richness and fineness, this very process must and will make use of the cultural stores embodied in persons, in institutions, in books and other cultural works.) The life process, to the degree that it is well directed from within, will call for the intelligent and sympathetic mastery and application by the pupils themselves of what is got from these cultural stores. (When things are thus sought and used because a life situation inherently calls for them, they are better learned both because they are personally desired and because they are more intelligently thought through and used. These are ideal conditions for study and learning.)

CHAPTER VI

SYSTEMATIC LEARNING ON THE NEW BASIS

How Order and Integration of Learning Results Are Effected

The problem of systemizing the results of learning is so important and has been so much misunderstood that it seems wise to pursue it farther even at the risk of a certain amount of repetition. The account here given, while originally written in another connection,* will supplement from various angles the discussion of the preceding chapter.

Is "progressive" education essentially haphazard or only seemingly so? Is there not real danger that with the increasing spread of the "activity" program our children may grow up without the depth and exactness and order and system that we have hitherto cherished? One often hears such questions as these, and while we may smile at the virtues attributed to

* This chapter first appeared in *Childhood Education*, June, 1935, and is here reproduced by the kind permission of that magazine.

the old ways we can still understand the fears regarding the new. The "progressive" program does seem haphazard. And in very fact it does not on the face of things make that showing of order and system which we have been accustomed to see in the ordinary school program. Moreover this characteristic lack of the older order and system is seen not only in the day-by-day or month-by-month program through any one year, but is, if possible, even more apparent in the year-by-year program through the total school course.

While these fears of the new are easy to understand, we must, however, if comparisons are going to be made, admit that there are dangers in the old as well as in the new. We need to understand that the apparent order and system of the traditional school program is both a snare and a delusion. Adult thinking, to be sure, can point to its obvious adult end-product system and order in the outlined program for the pupils, but this may prove to be the very reason why so many pupils and students, the products of the older system, now think so little and hold even that little so badly organized.

But the failures of the old do not establish excellencies for the new. There are real problems here involved. It is to the consideration of these problems,

not to the debating of partisan claims, that this chapter is directed. The aim is to find out what kind and degree of inclusiveness and continuity of study is needed—with what guidance to secure it—if the learner is to make the desirable fullness and orderly integration of his learning results.

It will help our search if we can see what constitutes normal and desirable child growth. We then go on to inquire which elements in this desired growth demand guidance, and which of these elements demands co-operative and consecutive guidance throughout the years of the child's school life. Our especial concern here is with two correlative matters: (1) the psychology whereby the learner may adequately effect long-term continuous growth of content fullness and the orderly integration of learning results; and (2) the practical procedures whereby teachers may effect the co-operative and consecutive effort necessary for guiding such growth.

WHAT CONSTITUTES DESIRABLE CHILD GROWTH

The word growth has many meanings. Here it is used to include all those changes in the total child organism that come about through interaction with the environment, with special reference, however, in what follows to such of these changes as lie within

the range of intelligent control. The term "desirable growth" perhaps now explains itself; it refers to all those changes that we desire and approve as we study their bearings on life, on the one hand to enrich the content of life, on the other to supply such knowledge, habits, and skills as bring control over the process. And here, as always with such words as indicate approval, there is implicit reference to some process of evaluation in which a conscious philosophy of life plays a significant part. The philosophy implicit in this presentation will perhaps sufficiently explain itself as we proceed, but its central features may be stated as (1) reliance on criticized experience as the final authority and (2) acceptance of democratic self-direction carried forward in the light of the common good as the means of practical management.

In order to state in simple terms what is meant by desirable child growth it seems necessary to name three background presuppositions in terms of which the growth is to be understood. First is the fact of physiological birth, growth, and death. The child starts as a mere animal, albeit more promising than the rest. Through interaction with its environment it grows into a widening range of sensitivity, habit, thinking, skill, and knowledge. After a period of

ruling control the mature grow old and die, while the young are ever coming on to take their places. Second, each child is born into a surrounding cultural group that has its own characteristic features different from those of other groups and times. Normally the child by sharing in the surrounding group life grows into fuller and more adequate participation in the culture and affairs of the group. Third, our culture here in the United States in the year 1936 is in comparison highly complex, subject to rapid change, and in particular disturbed by many social difficulties and problems.

With this as the background of understanding we are now ready to ask as to the desirable elements of growth. Since we are especially concerned with the psychology of long-term guidance, our analysis need not be exhaustive as to the several items of growth, but only as to their several typical kinds, with the kind of guidance appropriately involved. This consideration will materially shorten our inquiry and task. What, then, are the most significant elements of desirable growth?

Emotional adjustment as the pre-conditioning factor of all else.—The one fundamental element in desirable growth that is a pre-condition to all else is “emotional adjustment.” Without this, practically

all else comes to naught. Amid all other changes taking place the individual should by continual achieving prove able to maintain a satisfactory "emotional adjustment," a well-integrated personality. Since personal integration is not self-contained, but involves a satisfactory internal adjusting to the ever changing demands from the external situation, it requires no further words to show that the fact of integration is never completed, but is always in moving process. It is, however, most true that a certain relative degree of stability of integration is both desirable and possible. A satisfactory sense of security depends on it.

As regards this element of adjustment, it is not necessary to argue that proper adult oversight with frequent active guidance is essential to the achieving of well-integrated personalities in any family or school. Unless parents and teachers understand both the normal process through which children achieve and maintain emotional adjustment and the special dangers incident thereto, we can have no sound hope either that good conditions of wholesome living will be provided or that beginning maladjustments will be caught in time. Mental hygiene has won its unquestioned way into a proper regime of teacher and parental education. (No school is safe

without adequate provision for guidance under this head.

Guidance: its function and its dangers.—It may be helpful in connection with personality adjustment to anticipate some of the further discussion on guidance. We can then carry along with us a better understanding of how child learning and adult guidance are mutually related.

First of all, personality adjustment is the result of what the person himself, here the child, as such does. Many masterful adults, both male and female, do not like to admit their limitations here or in other learning situations where the same rule invariably holds. They mistakenly demand to keep all the child learning-growing process in their hands. The limitation here asserted does not mean that we adults can do nothing, but only that our efforts are indirect. We must, to use the once popular but dangerous term, try to get at the child's "will," for it is what the person himself inwardly and at bottom wills that determines the personality effect.

(Guidance becomes then but a descriptive term to denote our efforts at the wise influencing of the child's own inward attitudes and choices.) If guidance be too slight or unobservant or inconsistent, the probabilities of best child growth are lessened:

appropriate fruitful stimulation becomes less likely and beginning wrong tendencies will more likely grow up unnoticed. Also if guidance becomes too strong, i.e., verges over much on autocratic control, again are the probabilities of best child growth lessened: the child is deprived of a proper practice in responsible self-direction; he may grow (as is now true of nearly all school children) too dependent on outside direction; or he may (as is now true of many vigorous youths) grow rebellious or stubborn. By definition, proper guidance is the strict correlative of proper child growth.

TWO MAIN CHARACTERISTICS OF GROWTH

We are now ready to state the more general characteristic elements of desirable child growth. For our purposes these seem to fall under two main heads, (a) *an ever growing range of healthy interests* and (b) *an ever growing ability and disposition to base action on study*.

As regards the *ever growing range of healthy interests*, it would seem proper, negatively, to exclude in particular any excessive interest in self and its narrow welfare and, positively, to work for such specific interests as (1) identify individual welfare with group welfare, (2) enhance the quality of life

when it is lived (e.g., enjoy reading, get pleasure from the esthetic, see more in life about him, etc.), and (3) create ideals along the whole road of life, and in this way by supplying effective standards best take care of desirable details of many sorts. As we are throughout this paper concerned exclusively with building under guidance, the analysis just given is simply to show the kind of things included under the term interests and not at all to make an adequate inventory of life's interests. One thing, however, must be said. As children grow older, some of them develop quite specific interests—music, for example, or literature, or science, or mathematics, and the like. We shall later discuss how some of these may be definite enough to justify what seems the study of subjects as such. This will form a seeming exception to the general position of this chapter.

The second characteristic of desirable growth, namely the *ever growing ability to base action on study*, will probably seem either so commonplace or so strange that we must study it more in detail. The position here taken is that this acting on study is *the one fundamental essential* in such important life processes as (1) maintaining a proper integration of personality, (2) acting morally, (3) deciding wisely and acting prudently in affairs, (4) acting efficiently

in carrying forward any enterprise. If to include four such diverse kinds of things under one formula seems an extravagant claim, it is at least consciously and intentionally made.

Before we proceed to examine this seemingly extravagant position it is necessary to get clearly before us three underlying conceptions: (1) that life itself consists of the interactive responses of the organism with its environment; (2) that the organism as it thus interacts with its environment responds in some true sense as a unity, as an organic whole; and (3) that learning consists of the changes introduced into the organism as it interacts, especially with the novel factors in the environment. Fortunately these three related ideas are already rather widely known and accepted. We have already given some consideration to them in an earlier chapter, so that a few words of illustration will perhaps suffice for them.

BEHAVIOR AND ITS BIOLOGICAL ANALYSIS

We take, as was discussed earlier, for the unit element of life and learning, a person facing a situation. If there is something in the environment that so seizes upon the person as to stir him to some sort of action, then we say he is facing that situation. As the person thus being stirred faces this situation,

he feels on the inside what we may call want, wish, preference, or interest. Simultaneously the stirring works itself out in movements which tend to secure for him what he wants or prefers: either he makes seeking movements, or he makes avoiding movements. These movements (in the typical case) continue, and if need be vary, until success is attained (i.e., the want is met) or failure is established. In the stirring and the consequent movements the various resources and aspects of the person's organism are called into play: he feels, he wishes, he thinks, he tries, he puts forth physical movements, certain glands of internal secretion act, etc. It seems best to think of this feeling, thinking, moving, all as but differentiated aspects of the one organic response: they can be distinguished from each other in and for thought, but they cannot be found separated in fact. Now when the situation is sufficiently novel, the organism may find that its existing stock of responses does not suffice to deal satisfactorily with the situation. If so, it may contrive (create) what is to it a new response in which thinking, feeling, physical moving, etc., appear in one novel pattern. If this new response, after trial and/or consideration, is accepted for future use, the new response becomes incorporated into the organism on substantially

equal terms along with the other prior existing responses of the organism. These two facts of (a) contriving (or creating) the new response and (b) incorporating it into the organism, we denote by the one word *learn* and say that the organism has *learned* this new way of behaving. Since the organism responds as a whole, it learns as a whole; thinking, feeling, moving, glandular action, etc., are all inseparably blended in the new acquisition. Each act and instance of learning necessarily includes them all to a greater or less degree.

We are now ready to see how basing action on study is the one road to personality adjustment, moral conduct, prudential choice and action, and efficient execution.

Personality adjustment and basing action on study.
—The two principal types of maladjustment are (1) such a giving way to moods of anger or guilt or discouragement or sense of inferiority and the like that these become chronic and so thereafter interfere with intelligently directed conduct, and (2) such a refusal to see and take account of the pertinent factors in one's situations that this tendency to "refuse to face reality" becomes, in one form or another, chronic and so likewise thereafter interferes with intelligently directed conduct. Popular practice names

both of these as instances of "emotional maladjustment" but they are emotional only by selective emphasis (and in my judgment by bad psychology). As we saw above, thinking, feeling, physical movement, etc., all always go along together. In fact the difficulty in both these cases is not the absence of thinking but a poor quality or type of thinking. The discouraged pupil thinks of the mortification attending failure, dwells on it and nurses it, instead of asking himself, "Now that this has happened, what can I best do about it?" The customary school practices of marks and promotions with emphasis on success and failure bring maladjustment to many a pupil. If one will but study out the most feasible course of action and act that out in actual conduct, the mood will not gain abiding control, but instead the tendency to intelligent study may come to prevail. Control by mood spells maladjustment; control by intelligent study means healthy-mindedness.

The words "if he will but study out," etc., must not be taken to mean that the matter is simply one of some mysterious or miraculous "free will." Not at all. In any particular case, whether one will study depends on the habits one has built as these interact with the situation. We who are guiding get in our work on the situation side of this interaction, pos-

sibly to clear up misconceptions, possibly to remove disturbing factors, in any event to help secure successful efforts. We may then, if we are wise and fortunate, help determine the situation at hand so that even the unfortunate's weakened habits of study and acting will on that occasion suffice to bring success to his efforts. If so, the weak habits may this time grow stronger and so later again and again grow stronger until reasonable strength has been built back. In each actual instance, the child, as he then is, acts; but we perhaps can help to bring success rather than failure by our part in working on the situation. Basing action intelligently on study is the recipe alike for us who guide and for the one we would help. It does in fact constitute the one positive road to personality adjustment.

Moral conduct and basing action on study.—The same discussion holds of moral conduct. The heart of behaving morally is to base action appropriately on thought. Situations do not come already labeled as right or wrong. Man once fancied it ought to be so, and Moses and other lawgivers tried to make lists of the things that are right and wrong. But always some new and better dispensation has renounced the earlier effort and its error. No, we have to think about what to do. True enough, many

situations so nearly repeat themselves that we need only recognize them and act upon the results of past thinking. And many parents, even today, try to bring up their children as if this with their commands would suffice. But no such will suffice. We live in a world that develops in novel fashion. When we face a new situation, we have to think in order to know what is right to do. We recognize some familiar elements in it but the new case demands novel consideration. In fact in every case of real doubt, both the alternatives are offering themselves as right. Only after we have deliberated on the alternative lines of consequences can we decide on one in preference to the other—and so label one as right and the other wrong. We may be mistaken; we often are. But we have to do the best we can. We must think as broadly as we can and as unselfishly and conscientiously as we can. If opportunity permits, we should talk it over with others. What we do thus conscientiously conclude, fixes “conscience” for us. It is in this sense that we can and should “follow conscience.” But clearly the heart of it all is to base action on thinking and not on mere whim or impulse or past habits.

Prudential and efficient action and basing conduct on study.—The discussion as to both prudence and

efficiency is so nearly the same as the preceding that we need not repeat the argument. Old situations may call for little or nothing more than recognition, but new situations demand that we think them through before we can act. In these matters also we may be mistaken and we often are; but again we must do the best we can.

Where children have to act, we their elders have a double duty: the one to help them learn ever better how to judge against the day when they must and will judge for themselves; the other to protect them meanwhile from injury where we know better than they. And often these two, being contrary to each other, do put us in sore doubt as to what best to do. If we take too much of the deciding into our hands, then our children learn—as we earlier discussed—not the power and disposition to judge, but dependence on us or perhaps rebelliousness. Either is bad. (Our youth must learn ever better how to judge and to act accordingly, and they can do so only by practice in which acceptance of responsibility for results is the main factor to teach them.) But the very young, and perhaps some older ones, would at times damage themselves, not knowing the risk they run. In such cases we, their guardians, may have to choose between letting them learn and letting them

hurt themselves. If the hurt be not too great, we may let them try it. The resulting pain often teaches better than could anything else. If, however, the threatened damage be too great, we have to give up what they might learn in order to protect them from damage. But we must consider carefully. Either decision is a choice of evils. We, as they, must learn to base our action on the best thought we can give.

It requires no further words to point out that we can by thoughtful guidance help those under our care to judge before they act. But if they are to learn, it is they who must judge, they who must think, they who must decide. So we help them as best we can to think and decide in the light of ever deeper insight and wider vision. In the whole round of life, then, in personality building, in moral conduct, in efficiency in prudential affairs, wherever we take it, the thing needed is to learn to base action on ever better study and thought.

HOW THINKING IS LEARNED

The stress herein placed on thinking calls perhaps for some attention to how one learns to think better. Two things go together here. On the one hand is the individual child and his experience and growth; on the other is the cultural group into which the

child is born, with its guiding influence on him and his conduct and on his consequent learning.

As far as his thinking goes, we may say that the child starts at birth "from scratch," and thinks only as he accumulates and organizes meanings. The learning of meanings comes from his experience in the life that goes on about him. In particular, he has to understand others and what they are doing in order to adjust his life accordingly. He learns to make those distinctions and to accept those meanings on which the situation at hand turns. After a relatively slow start words come in to help make the process go forward much faster and more precisely. By means of words and the common instrumentalities of life the child comes increasingly to share in the common stock of meanings, ideas, attitudes, interests, skills, habits, customs, and moral and logical distinctions of his group.

(The most of what we call individual or personal intelligence has been thus learned from the group store.) If the parents have clear ideas and make nice distinctions, the children will likely learn so to think. In particular, if parents can and do generalize in their own thinking, they will naturally help their children likewise to generalize. Each new concrete situation as it comes up can then be discussed so that

the child not only gets the new element in it but sees this in its wider setting and relationships.

We cannot too much stress the varied elements of the learning here sketched: (1) getting new individual meanings from the situations where something turns on them, ever more of such meanings and ever better validated, (2) discriminating meanings ever more nicely, (3) generalizing and enlarging specific meanings and connecting them together ever more broadly, (4) putting all of these ever more precisely to work in the actual situations of life, deliberating ever more carefully over what is to be done, reasoning ever more precisely in connection with doing. It is in these varied but interrelated processes that one learns better how to think

Several things should be noted in connection with the foregoing lest we be led astray. First of all, it is in the actual situations of life that learning best goes on. Books will be used, other sources of information will be utilized, but it is the final practice of using these in actual experience that must both test and fix. Second, what is learned is normally put to use shortly thereafter because through it one is now sensitive to new factors, sees still other meanings, can marshal new resources. In this sense life, at least in the early years, develops with continually

increasing richness, reconstructing itself continuously on the new meanings thus got and used. The same thing is true of later years, but less easily observed because the rate often slows down, especially for the mature who are disadvantageously placed. Third, in order that what is thus learned may be many-sided, inclusive of the various possibilities of life, the range of experiences met must be sufficiently broad. One's surroundings may be so poor in variety and opportunity that what is learned is narrow, meager, one-sided, rather than broad, varied, and rich of content and distinction. Fourth, many desirable aspects of life—conceptions, insights, systematic views—require years and a favorable succession of experiences to build; and, for the many, will be built then only if there are effectual contacts with others who, further along in the process, share in the building experiences.) Especially needed here is contact with cultural groups already possessed in considerable measure of the desirable conceptions, insights, and systematic views. This fourth need is, to be sure, nothing more than a more advanced stage of growing up in a cultural group already previously discussed (p. 86). Psychologically, the process is precisely the same as that of the infant growing up in the family, only in the higher reaches the culture must itself be

in process of creative reconstruction if the best learning results are to be achieved.

The whole discussion of our original problem is now before us. We need only to call attention to a commonly mistaken idea, and draw the conclusion. And what is this commonly mistaken idea?

THE FALLACY OF LEARNING BY THE LOGICAL ORDER

Many people seem to think that the order and arrangement in which ideas are held for use must fix the order and arrangement in which they are learned. Common as is this idea, it has, so far as appears, no foundation in fact.

The time was when number facts and relationships were learned in tables, presumably because this seemed the most logical way of arranging them after they were known. But now we think this is not the best order of learning.

Similarly, some writers on history teaching seem to think that history must be studied in extended chronological sequences, if the facts of history are to be finally held in chronological order. It seems safe, however, to assert that this is wholly fallacious. No one who knows much of history ever learned it all in one chronological sequence. Instead, a common way, at least among the better educated of the past,

has been to learn, in one grand scramble, the ordinary day-by-day occurrences of childhood, some of mother's childhood experiences, some biblical history, some United States history, some Roman history, some Greek history, some particular periods in history, etc. Somewhere along the line, possibly with the Greek and Roman history, a skeleton of western history was hazily sketched. This was then held in process of correction and filling in as each new item or period was studied, with no end to the process as long as new items were got. Usually Chinese history, for example, never got into the picture. For orderly learning in this field two things seem important: the one, the seeing of the significant causal connections between or among related events as these are studied; the other, the seeing of the whole in that seamless web we call history, of which the chronological order is simply a longitudinal cross-section. These two processes have to go on together, only we must be content toward the beginning with only small patches of the seamless web, different foci of organization, which will later be joined together.

A like discussion holds as regards mathematics and the sciences. In mathematics the logical order is usually counted to be that of proof and most books on mathematics are so constructed. But here again the

order of learning is never the order of proof, as anyone can testify who has studied the subject far enough to get to the theory of functions. In ordinary algebra we blithely assume matters that have later to be re-examined far more thoroughly. Anyone who really knows is ready to admit that our beginning algebra proofs were very inadequate. And in any particular instance, as the solving of an original in geometry, the order of study and learning is as different from the final order of demonstration and proof as a lost person's wanderings on a mountain-side are different from his direct path after he has learned the region.

PRINCIPLES OF GUIDANCE

This last fact should give us both help and warning in guiding students. We get positive help as follows: Where we count that the student will later probably be called upon to use his own intelligence, as in seeing the number relations and problems in ordinary practical situations, there we must expect him to do a good deal of mountainside exploring on his own. We may at times go with him and from time to time assist him, but he will know the region for his own later use only as he accepts responsibility

for thinking through his own experiences. And he will wander intelligently only as he is at each moment pursuing some problem or other quest. He must then wander, and he must think his meanderings to some final order, or perhaps better a congeries of interrelated orders. On the other hand, however, the ordinary student in engineering, for instance, need not learn how to derive his tables of logarithms and trigonometric functions. He need only be intelligent in their subsequent use.

The warning here is against short-circuiting a needed wandering. If there is a region in which a student is himself to be intelligent for later fruitful thinking, he must (as we have just discussed) wander about over it in the pursuit of problems that have meaning for him so that he himself knows the country. If this has been well done, he will have been ordering the congeries of connections above suggested, and he can then, when the need arises, map out any desired course through any part of the region. But if we, to save the student's time, furnish him with the final orderly statement of our expert thinking so that he simply "learns" this or simply "learns and understands" it, we shall very likely prevent him from building an adequate knowledge of the region or matter at hand. He must explore

for himself and himself accept responsibility for organizing the results.

Is there then nothing that we can do to help? Are we not asking that the child himself learn unaided all that the race has taken these millions of years to acquire? The answers are that we can help and we are not asking the child to throw away the results of the race experience. As with the logarithms and sines and tangents we did not ask the young engineer to calculate the tables or even to know how they were calculated. We asked only that he be able to use them intelligently. This principle intelligently applied saves him from rediscovering most of the race achievement. But if he is going to be an intelligent engineer, he will face a variety of experiences in which he is thrown relatively "on his own." Otherwise he is a "rule of thumb" man, capable only of repeating what he has been told. We who know more about engineering can help him by advising on the selection of projects to work out so that he does not waste time by attempting first those beyond his depth, and also so that the succession of projects does carry him pretty well over the field he must explore. But if, as many wrongly do, we map out say sixteen "experiments" in chemistry and so suggest the steps that the stu-

dent is not really called upon to exercise responsible thought, then we must not be surprised if we simply make docile copy-followers (or perhaps indignant rebels). In neither case does the learner come out with an effectual organization of the region he has professedly studied.

To organize means a selective arrangement, a sorting of many meanings according to inherently felt connections, so that when we need them we shall have them available for use. The user must make his own organization, his many varied organizations, out of his own experiences and for his own use. We can help guide his experiences so that they are manageable and fruitful and so that they present sufficient variety. We can less often help with the actual organizations made, for these are many, not one; but we can help in such details of organization as working out cause-and-effect relationships with a wider understanding of the principles involved. These constitute the chief basis of useful organization. So more generally, we can help to many wider meaning connections by helping with the intelligent discussion of significant principles. These are perhaps the ways in which we can best help by guiding.

SUMMARY AND CONCLUSIONS

In what follows it is assumed that the teaching will be by activities, not by subjects, not only in the elementary school as is becoming common, but ultimately, be it hoped, also in the secondary school. In addition to activities, permission should increasingly be given say from fifth grade on—to those who can justify it—to follow up specialized interests, often in music and literature, frequently in science or mathematics or story writing. With the oldest pupils some of these specialized interests might approximate ordinary subjects. We may then conclude as follows:

1. Definite school effort will be necessary if pupils are to secure adequate range and inclusiveness of study and learning on the one hand, and adequate depth and organization of learning results on the other.

2. Such school efforts should not follow the hitherto usual method of having pupils acquire subject matter set out for them in the usual school subjects or in any other logically organized formulations. The order and arrangement of actual learning are almost of necessity different from the order of holding learning results in the mind for use. To use

the latter order for study purposes is almost sure to hinder learning and helps little if at all in organizing for use.

3. The school's effort should show itself not only in what the teachers do separately, but even more in consciously formed co-operative efforts among all who deal with the child both during any one year and throughout the successive years.

4. Each school, and each teacher, should all the while be building and using as inclusive and satisfactory a philosophy of education as possible.

Correlative with such a growing philosophy each teacher and each school should build into their very souls a growing "map" or scheme of values, interests, meanings, conceptions, habits, skills, attitudes—and, parallel with these, the general regions of effort and inquiry through which the values may be realized.

Every teacher working with any child or group would use these values as sources of sensitivities to what is emerging in any activity or may be made to emerge. The teacher would then help steer the activity along lines that promised to secure the best possible value results, all things considered. In particular for the present discussion, when a long-term conception or interest is actually or potentially involved, the teacher will so deal with it in terms of

what is going on that the pupil or pupils may grow as best possible in respect to that conception or interest, due comparative regard being had to other values involved.

5. Care should be taken, as any sufficiently important item first appears in concrete setting, so to consider it that the pupil will get its underlying causal connections, see it in its wider possible connections, and if possible understand it as an instance of a significant inclusive principle. So to generalize the particular is perhaps the greatest single service we can render by way of helping our pupils on the road to better thinking.

6. Such a "map" or scheme of values as that above suggested and the use of it, along with the underlying philosophy, should be matters of continual discussion by the staff. What new conceptions should we add to our list? What changes in our present conceptions so as to take better account of new developments? Is our list of skills adequate? What degree of growth should we normally expect of nine-year-olds in respect to our values? Are we properly following year after year the long-term interests and conceptions? Do we work well enough together in building an unselfish regard for the public welfare? How could we do better? Are we having our pupils

dig down deep enough in their thinking? Or are they being satisfied with superficiality? Do our twelve-year-olds really understand our "economic interdependence" or are they just using words?

7. Finally, it is intelligently directed *acting on thinking* that alone can effect in our pupils the desired range and depth and organization of learning results. If our pupils meet a sufficient variety of life's situations, themselves accepting responsibility (1) for thinking ever better before they act, (2) for acting on the best insight they can get, and (3) for looking back on the experience to profit as best possible from it—if these things be done honestly and thoughtfully under our intelligent care during the successive years of school, then the other things will be added unto them. Range and depth and organization will follow, along with other character results.

But none of these things can reasonably be expected unless we the teachers are intelligently concerned at each stage to help forward in the highest attainable degree the process of responsible thinking and acting. We must work co-operatively during each year and through the succeeding years. This is the price we pay; but if we really pay it, the results are worth the cost.

CHAPTER VII

A SUGGESTED NEW SECONDARY CURRICULUM

The proposals for remaking the curriculum discussed in the preceding chapters have found readier acceptance in the elementary school than in the secondary. Probably it is the existence of departmentalized teaching that has opposed the spread of the "activity" movement to the high school. Many secondary-school people admit readily enough a strong argument in favor of basing education on the life process as hereinbefore discussed, but they do not see how they can give up the concentration and specialization that departmentalization of teaching allows. So far these have accordingly been unwilling to follow a procedure that ignores subject-matter lines.

Without discussing here how much of this devotion to teaching by distinct subjects is the inertia of tradition and how much of it is justified on sounder

grounds, let us admit outright that some pupils can and will profit by at least some of the concentration and specialization which is permitted by existing high-school departmentalization. But it does not follow that all pupils profit equally by such a regime nor that any pupils of secondary age need to have their whole school time so split into separate subjects. For one thing, there are strong reasons why some one teacher should have such continual and extended acquaintance with each distinct pupil as to permit a degree of personal counseling and guidance denied under a complete regime of departmentalization. It appears exceedingly doubtful that demands either of mental hygiene or of proper educational guidance can be adequately safeguarded on the usual basis of departmental teaching.

Furthermore there are many high-school pupils for whom the need for extended specialization is far from clear. Especially is this true where anything like all pupils of high-school age continue in school. If the considerations advanced in the preceding chapters for remaking the curriculum are granted to hold for the elementary school, as they increasingly are so granted, there appears no obvious reason why the argument should suddenly fail of cogency as children get to be around twelve or fourteen years of age.

In fact if the arguments hold for the elementary school, the burden of proof would seem to lie with those who claim a difference for the secondary school.

It is from these considerations that the proposals are herein made for a new type of secondary school. The aim is to contrive a school program that will keep education for all the pupils on a basis of living for most of each day at the beginning of the high-school period and grant the privilege of specialization only as an affirmative case is made out for each individual concerned.

To fix ideas, suppose the 6-3-3 plan is in operation with the elementary school run on the basis advocated in the preceding chapters. In the sixth grade the teacher has had charge of all the pupils certainly most of the day, and this teacher has tried to manage the education of her pupils on a thoroughgoing living process basis as has been discussed. This means that the various sides and aspects of life suitable for rounding out life for pupils of this age have been cared for by the on-going curriculum. And the teacher has sought to have the pupils grow each in ever more adequate self-direction as they have faced the successive situation-experiences that have constituted the activity curriculum. Each pupil has mean-

while been to the teacher a distinct personality, studied and guided as such, so that always the "whole child" might grow best into ever fuller and more adequate participation in the surrounding cultural life. As the children have thus been studied, the teacher has learned that they had different abilities and widely varying tastes and interests. Within certain social-moral limitations, it has been a definite aim of the teacher to cultivate each such individuality for all it was worth. James has been encouraged to study electricity, and Henry butterflies, while Mary has been encouraged to follow her special interest in music and Susie her interest in drawing and Lizzie her wish to write poetry. All such special interests have been cherished and cultivated as choice instances of budding individual life.

Now according to the plan herein proposed the seventh grade would be run in much the same way as was the sixth. One teacher will be in principal charge of all the children. The main part of the class work, perhaps three fourths of it, will be common to all the pupils; and this will be guided, as was done the year before, so as to care for all the sides and aspects of the well-ordered life. There are two differences between the seventh grade this year and the sixth grade last year: one, the pupils are a year

older and have got farther along in knowing and managing life; the other, some of the pupils are ready by special taste and aptitude to take up seriously one or more lines of specialization. James wishes to carry his electricity further in the direction of a more general science and John wishes to join him. Henry's butterflies now call for a wider study of biology. Mary's music is ready for further and more consistent study, as is Susie's art work. Lizzie's poetry now reaches out into a closer study of literature as well as more adequate writing. Other pupils wish to begin algebra, and some others typewriting.

When the sixth-grade teacher had sent these pupils on to the junior high school, she had told in her records of the various interests and abilities so far as she had known of them. The more definite and pronounced of these had been talked over both with the preceding year's fifth-grade teacher and with the principal. So that this year's seventh-grade home-room teacher is prepared in advance to give approval for some tryout specializations, and during the quarter of the day set aside for such specialization these pupils will go to other rooms to work under teachers especially qualified to give the needed advice and help. As any such tryout justifies itself it may be continued and expanded, under the joint advice of

the home-room teacher, the parents, the subject-matter specialist, and the school's general counselor (dean, principal, or other guidance officer).

Those pupils who have as yet found no special task or interest will continue to work together during the specializing period at any matter that seems best to teacher and pupils, possibly in one large group, possibly in smaller groups, possibly at individual projects. It is the business of the seventh-grade teacher to help the pupils here as elsewhere and always to use their time to best advantage.

When the same pupils reach the eighth grade, they will find the same general state of affairs. They are now a year older and still farther along in insight into and control over life. More will have developed individual tastes and interests worthy of specialized pursuit, and some will need more extended periods of study. Possibly one third of the day may now be devoted to these approved specialized interests. And similarly for each succeeding year to the last, always for a large part of the day all the pupils are together under one home-room teacher, while an annually increasing proportion of the time will be available for approved specialization. What proportion of the work of grade twelve will be common may well be debated. My own opinion is that

from one third to one fourth may well be so spent. For pupils going on to colleges which are still so backward as to specify precisely their entrance requirements, possibly a large part of the day given to departmentalized work may be needed. But this now seems, to me at any rate, not the best use of their time.

Such an arrangement as that here sketched contemplates that practically all pupils of secondary age will soon be enrolled in secondary schools. To the degree that this is so, to like degree should all be as a rule "promoted" (if this old-fashioned term be still retained). At the end all will as a rule "graduate," with whatever recommendations for further work fit the conditions then obtaining.

Two reasons seem especially to support the plan outlined above. First, all pupils will (so I believe) profit by giving a good portion of their school time to such a life-process program as ignores subject divisions. Only thus can they learn to study and work as life requires. Second, many pupils, just as many adults, have no need to specialize in the way and along the lines set out by existing school subjects. In fact, it probably hurts most of such pupils to spend time on such logically organized subject matter. In the years gone by these pupils have usu-

ally dropped out of school. Now they continue to the embarrassment of all concerned. Such pupils need help with the problems of life itself and less of the formal school work. The plan proposed allows adjustment to meet each particular case, and thus allows the more intellectually inclined and the more specifically interested to pursue their work under conditions more favorable to them.

A word now about the more practical side of the problem. This plan is here proposed for study and experimentation. So far as is known it has never been tried. It would appear to be feasible both for small and for large high schools. Just what changes actual trial would require in the plan we can, of course, tell only upon such trial. Two things would seem necessary for a beginning: first, that there be a will to try the plan, and second, that teachers be found who can carry on the activity program on the high-school level. In 6-3-3 school systems that already have the "activity" program in the elementary school there could easily be found sixth-grade teachers who would like to carry on the like work on seventh- and eighth-grade levels. And similarly in many 8-4 school systems, there can be found seventh- and eighth-grade teachers already carrying on "activity" programs who would like to go for-

ward into the ninth grade. It would be comparatively easy for the larger institutions that prepare both elementary and secondary teachers to take on the new work of preparing activity home-room teachers for the high school. This need involve no heartburning since the present specialized preparation for high-school teachers could continue much as hitherto. However, teachers expecting to go to small high schools would have to prepare both along the "activity" line and in one or more subject-matter specialties.

That we need to change the secondary school rather drastically is admitted by an increasing number of American educators. The foregoing plan is proposed as both easy to try and promising of good returns.

CHAPTER VIII

OBJECTIVES FOR CURRICULUM AND METHOD

It seems wise in this the closing chapter to bring together under one head and discuss more adequately what has already been implied as to objectives that the teacher should keep in mind in directing curriculum making and method.

In most of the older discussions on curriculum making we find attention mainly centered, at least ultimately, on specific items of knowledge, skills, habits, and the like, that pupils should acquire. And commonly these objectives have been discussed as if each such item could and does exist, and can be considered, in and of itself as a distinct and separate affair. For teaching purposes, this older outlook customarily organized these items logically into subjects and assigned for the daily lesson some convenient subdivision of such a subject. In other words, this older view considered learning as the ac-

quisition of subject-matter-set-out-to-be-learned and educational objectives as more or less self-existent atoms which were to be learned, and held for later use, in some logical order of arrangement.

In this discussion this atomistic view of objectives, with its logical order of learning by separated subjects in long-range advance of actual use, is totally and wholly rejected as thoroughly misleading and mischievous, being in fact the antithetical opposite of the best available conceptions both of the life process and of learning. In contrast with such an atomistic and static conception of objectives the aim here is to set forth dynamic objectives inherently related to life as a process and therefore to natural and useful learning.

Thus to prefer a dynamic view of life and learning is not to deny, or even belittle, matters of knowledge and skill and habit. In the end, the procedures herein advocated may reasonably be expected to call for more of knowledge, skill, and habit than do the more traditional procedures. However, the chief advantage claimed for the newer view is not the greater amount thus learned. Rather is it the fact that what is learned is learned in such dynamic and meaningful connections, both immediate and remote, as to constitute far more valuable learning.

When, for example, a child learns to spell a word or perform an arithmetic operation for which he has no present use, learning it simply because it has been assigned as a task, such items of learning necessarily lack proper meaning connections. It is also true that they lack the kind of interest which makes learning wholesome and promising. When, however, under wise guidance the child is pursuing with hearty purpose some worthy aim and endeavor of his own, there will necessarily arise occasions when he must seek knowledge and skill that he does not as yet possess. The fact of seeking the knowledge with intelligent and zestful aim means that he thoughtfully studies an area and range of possibly pertinent knowledge, rejecting and accepting as he studies, until he finds what he needs. Such studying, with both its rejecting and its accepting, builds for him new meaning connections within the area studied, and tends toward making him more intelligent in that area.

When he has found what is seen by him to answer to his quest, the early acceptance of this on its seen merits and with its recognized meaning connections does for him two things at one and the same time. First, the hearty satisfaction that arises for him fixes that matter in his mind and heart, so that it remains

more firmly implanted to abide for later pertinent use, far and away better than would any possible learning based on a less inherent interest; this is a great advantage over the old. Second, what is thus learned is acquired in such thoughtful connections, both from the search and from the finally seen pertinence, as to constitute a more serviceable type of learning. This second advantage is so great as to require an added word of comment.

The probability that any learned item will later find its way into fruitful use depends partly on the number and variety of meaning connections that it carries, partly on the type of meaning connections achieved, partly on its relatedness with the matters likely to come up later in one's life.

The first factor—*the number and variety of meaning connections*—calls on us as teachers to help children think much and well about what they do. The second—*the type of meaning connections achieved*—calls attention to the fact that certain ways of thinking are more useful than others. Mere multiplicity of connections does not suffice, as we see with those persons—victims of “total recall,” James called them—who recall and tell everything suggested by the question under discussion whether or not it is pertinent or useful. Cause-and-effect connections are in

general more useful than mere chance associations. Generalized conceptions, as Judd has emphasized, allow applications to novel cases better than do mere specific instance learnings. Ideals, or generalizations joined with dispositions to obey them, are, as Bagley early emphasized, of peculiar service for taking care of novel cases that arise. The teacher will thus seek to have pupils think cause-and-effect relationships, generalize the significant instances that come up for consideration, and perhaps even more zealously work in season and out to build inclusive and generalized ideals. For all of these things will count fruitfully in the days of future application.

The third factor noted above in the probability of later usefulness of what is learned, namely *its relatedness to what will likely follow in life*, directs our attention to the continuity of life's interests. Basic interests tend to persist and new interests tend to grow out of older ones. Good teaching will therefore use the child's present interests as one basis of preparing better for the future. To be sure, not all present interests are equally good; there must be selection from among them. But to use the existing stock of interests for what they are worth, developing these into finer and better interests, always working, however, within the range of available interests—such a

procedure not only enlists the child's dynamic drives on our side (as we seek his best growth), but joins the present content of life more probably with his future through the fact noted just above of the persistence and continuity of interests in life.

The old-type school ignored this factor, so that not only was the study it got less zealous and less concrete, with correspondingly less satisfactory learning results (as we saw in the preceding paragraphs), but also what was learned, being but slightly related to the child's present life interests, had little chance to go along with him into his developing future. The consequence has been that school learning has tended to be remote from life, academic in the bad sense, and therefore easily and naturally put aside into oblivion as the child has gone on into later adolescence and maturity. This aspect of building on interests is one of the chief assets of the newer outlook.

We are now ready to state somewhat more concisely our doctrine of educational objectives.

(1) Let us think, not generally or primarily, in terms of specific facts or skills, but rather in terms of growing, that *present activities shall lead on fruitfully to further, finer, and better activities*. Broadly interpreted, the principle of "leading on" is the principle of life itself qualitatively considered.

(2) Let us work, as a rule, not for single items, still less for lists (for these are an abomination), but rather *for ideals* which, to the degree that they are got, will of themselves then take care of countless items. We should thus not be concerned to teach spelling lists (they are an invention of the evil one), but try to build the ideal of correct spelling for all the words as they are used.

Working on this basis, the teacher can help take care of failures and mistakes as they arise, but better still can help the children anticipate difficulties likely to arise. This, however, should be done always in the service of the ideals that are already in process of building, ideals that promise to take inherent care of manifold items. To the degree that such ideals can be achieved, there then follows that thoughtful self-directed attention to instances which alone brings competence.

(3) Let us work *to build dynamic interests*, starting with those that now exist, but working always for stronger and finer and richer interests, interests that lead ever into new fields and deeper insights. These constitute the richness of life, especially as they are got on the dynamic and growing basis.

(4) From the social and moral point of view, what we are to work for in season and out is *ever more*

adequate self-direction,⁴ self-direction of the individual as we work with each child, self-direction of the group as we work with classes.

All of this is but the educational statement of democracy. That the self-direction may be ever more adequate, it must learn to take ever more into account and take this ever better into account. If we understand thinking and acting properly, we may sum up this fourth item in the words, *ever better acting on thinking*: ever better thinking to tell how to act, what to do; ever closer study of the results of the acting so as to test and correct and improve the thinking.

If any have ever thought that the general point of view herein advocated was individualistic in the selfish sense, it would be impossible to imagine a greater mistake. To take ever more, ever better into account as one acts is the precise opposite of selfishness. This point of view stresses individuality, not individualism. It believes that all social arrangements exist to enhance and express individuality. But its concern has always been for an individuality that is increasingly considerate of other individualities in order that all may live justly and well together in all the varied interactive co-operations that make life rich and fine for each and all.

In Summary

Thus closes the discussion. As we have studied together, we have seen how new social conditions demand a reconsideration of the curriculum along with all else connected with the school. A new psychological insight helps us see at once both the possibility and the need of revising our conception of learning and consequently our conception of curriculum and method.

The stream of life has been found to develop novelly. Life itself is the effort of the organism to cope continually with the ever oncoming novelty. In this the organism behaves in a true sense as an internally co-operating whole. The true unit of study is the organism-in-its-interaction-with-the-environment. Learning is the name we give to the twofold fact that the organism facing novelty may devise and create a new way of responding, and that this new response if accepted for action becomes thereby incorporated into the action system, or very being, of the organism itself, there to make available for the future the results of this experience.

Thinking has appeared as an especially important aspect and factor in behavior. For man, thinking on the one hand builds a cumulative culture and on the other allows each growing child through association with others to build the simultaneous conceptions of self (*ego*) and other (*socius*). By means of these self-other conceptions man achieves meaning (intention) on a plane apparently denied the lower animals and on this plane builds mind, sense of responsibility, and conscience.

These conceptions are embodied in language and otherwise in the culture, and so form the chief means for educating succeeding generations to the level of the race-wrought accumulations. Schools exist (at least in a democratic society) to help the young grow up into intelligently self-directing members of the culture group, able and disposed to join with others in the continual task of remaking the common culture and life into something ever finer.

The remaking of our ideas regarding curriculum and methods must in such ways as these be a perennial task, perhaps never more needed than at the present. It is to help with this task that this little book has been written.

INDEX

- Acceptance: essential in learning, 27f., 51ff., 63; incorporates new into old, 27f., 63
- Acting on study of the situation: meaning of, 53f.; as educational aim and process, 53f., 55, 57, 76, 77f., 87f., 97f., 115; as essence of moral conduct, 82ff.; as factor in emotional adjustment, 80-82
- Adult education a permanent need, 20, 45
- Aims (general). *See* Goals
- Aims (in education): acting on thinking, 53, 55; increasing self-direction, 18, 33, 55f., 60; to intelligence building, 20, 44; stated, 45, 46f., 56, 57; secondary aims, 56, 57. *See also* Goals; Goal-seeking; Objectives, Educational; Purpose
- American dream: as conceived by Lincoln, 19; no longer holds, 19
- Analytic method (in science): discussed, 16; basis of "scientific" education, 16-17, 17-18; in psychology, 17f.
- Arithmetic, as taught in Manchester, N. H., 67f.
- Atomism: as basis of learning, 108f., 114; in Newtonian science, 16-17; in "scientific" method, 16-17, 17-18
- Attitudes: affect choice, 31; how built, 29f., 53
- Bagley, W. C., referred to, 112
- Behavior as organism-environment interaction, 23ff., 78f.
- Benezet, L. P., arithmetic program, 67f.
- Biological analysis of behavior, 78ff.
- Change, Social: discussed, 14-15; calls for new educational outlook, 14-17, 22, 34ff., 43; modern conception of, 14; requires thinking, 14-15, 34, 44. *See also* Cultural lag

- Child: before subject matter, 31-32; present living, 31ff.; our aim for, 46f.
- Childhood Education*, referred to, 69n.
- Choice: affected by attitudes, 31; involved in learning, 52; means of self-building, 28
- Chronological order of learning, 89-94, 95
- Citizens, must criticize institutions, 15, 34, 44
- Civilization. *See* Culture; Change, Social
- Class group process: as educative influence, 56, 60f.; internally directed, 60f.
- Competitive business, hurtful to life, 20, 35
- Concomitant learnings. *See* Simultaneous learnings
- Conditioned reflex, in "scientific" psychology, 17, 18
- Consecutiveness of learning results, how secured, 56f., 58-68 (Chap. V), 69-98 (Chap. VI)
- Control, conscious, 23. *See also* Purpose; Efforts
- Co-operation: discussed, 42ff.; necessary to civilization, 42ff.
- Creation: as related to cultural molding, 37ff.; inherent in learning, 22, 26-28; sociological vs. psychological, 37ff.; stressed in the new outlook, 22, 28, 33
- Creation-imitation scale, referred to, 38
- Criticism, institutional, demanded by change, 14-15, 34, 44f.
- Cultural contribution to thinking, 86-89
- Cultural lag: discussed, 13-14, 34; the acutest lag, 14
- Culture, the: a balanced whole, 13-14; acquisition of, 36ff., 43f., 46f.; admits individual creating, 37ff.; how developed, 14; molds the child, 36ff., 43f., 54f., 59; prior to individual, 36, 42
- Curriculum: defined, 47; a suggested new secondary curriculum, 99-107 (Chap. VII); as process of living, 46-57 (Chap. IV), 58ff.; as seen by analytic science, 16-18; child before subject matter, 31ff., 56, 67f.; demand for new, 13-20 (Chap. I); guidance in, 54ff., 58ff., 66ff., 101ff.; "map of values," 96f.; objectives for

- curriculum and method, 108-115 (Chap. VIII); on basis of purposes, 18, 32f., 48ff., 60ff., 66f., 68; on basis of subject matter, 18, 31-32, 32f.; unit of, 18, 32, 47ff.
- Democracy: educational aims, 15, 34f., 44f., 47f., 114f.; in changing civilization, 15; demands institutional criticism, 15, 35f., 44f.; requires intelligence, 20, 35, 44f.; to be maintained, 19-20, 35; vs. dictatorship, 36. *See also* Equality of Opportunity
- Departmentalized teaching: as factor against remaking secondary school, 99; as preparation for some colleges, 105; profitable for some but not all, 100f.
- Dewey, John, quoted, 24f.
- Dictatorship, denies democracy, 36
- Distinctions (for thought): how learned, 38f., 86-89; in the culture, 39
- Drill: stressed in the older psychology, 26, 32f.; supported by motivation, 33
- Dualism: in Newtonian science, 16-18; in "scientific" education, 16-18
- Education: a lifelong process, 15; as goal-seeking, 18, 26; as preparation, 32; as self-building, 28f.; as transmission, 20, 26; controlled from without, 17-18; must be experimental, 15; social education, 15, 35f.; the so-called "scientific," 16-17, 17-18. *See also* Curriculum; Learning process; Objectives, educational; Subject matter
- Education, public: must cultivate intelligence, 44f.; must foster criticism, 44f.
- Efforts: arise in upsets, 22-23; conscious vs. blind, 23; imply a goal, 23
- Emotional Adjustment: always in moving process, 74; as pre-condition to all else, 73f.; and basing action on study, 80-82
- Emotions. *See* Feelings

- Ends (aims). *See* Goals
- Equality of opportunity, now gone, 19-20, 34-35
- Evaluation in "scientific" education, 17-18
- Experience: as basis of meanings, 86ff.; as final authority, 72
- Experimental living necessary amid change, 15
- Facing a situation. *See* Situation, facing a
- Feelings (emotion): at varying stages, 24; learned, 29f.; may increase effort, 24
- Generalization: necessary to good organization, 64f., 87; service of, 112
- Goals (ends, aims): guide action, 50; guide learning, 28f.; implied in upset, 23; the stuff of life, 25-26. *See also* Goal-seeking; Purpose
- Goal-seeking: characteristic of new psychology, 25f., 28f., 33; defines life, success, value, etc., 25f.; secures guidance, 28f., 54f., 58f. *See* Goals
- Good life, ideal of, 43
- Government, conception of, how learned, 61ff.
- Growing (child): defined, 71-78; growth in thinking, 85-89
- Guidance: defined, 75; by parents, 55; by teacher, 33, 54ff., 62f., 91-98; hindered by departmentalization, 100; how purpose guides, 28f., 54f.; in emotional adjustment, 74-75; in secondary school, 101ff.; inherently indirect, 55f.; inherent in living, 54f., 58f.; opposed dangers in, 62f., 75, 85, 91-92, 94; "map of values," 96-98; to secure organization, 55ff., 71ff., 91-94, 96-97
- Habit: directed by thinking, 25; inadequate to novelty, 14-15, 25; in "scientific" education, 17-18
- Habits and skills, 109
- Hobbes, Thomas, social contract theory, 42
- Ideals, building of, 112, 114f.
- Imagination, present in making plans, 50

- Individual: how related to society, 36ff.; prior to society, 36; society prior, 36ff., 40; subordinate to state, 36
- Individualism, rejected as educational aim, 115
- Individual differences, how considered, 56f.
- Individuality: meaning and building of, 37, 39ff., 60, 114-115; depends on the complex culture, 40
- Indoctrination, inadequate, 15, 20
- Industrialization. *See* Social-economic situation, current
- Institutions: nature of, 42ff.; need remaking, 43ff. *See also* Culture
- Integration of personality. *See* Emotional adjustment
- Intelligence, building of: a current need, 20, 44-45; how effected, 39, 44f., 86-89
- Interest: defined, 49; discussed, 49; better on new basis, 60; when lacking, 49-50
- Interests: as basis for specialization in secondary school, 103ff.; as evidence of growth, 76; fostering, 49, 103ff., 112-114

Judd, C. H., referred to, 112

Knowledge, theory of, as prior to experience, 21-22

- Language: contribution to thinking, 86; how learned, 37ff.
- Learning process: accumulating results, 63ff.; as acquisition, 18, 21-22; as based on actual situations, 48ff., 60ff., 86-89; as instrumental, 22, 29; continually rebuilds the self, 28f., 52f.; creates its own subject matter, 18; creative, 22, 26, 37ff., 51f., 79f.; includes whole organism, 29ff.; in meaningful connections, 86-89, 110f.; involves acceptance, 27f., 51f.; inherently purposive, 26-29, 79f.; organizing, through logical or psychological approach, 89-94, 95; simultaneous learnings, 29ff.; studied by nonsense syllables, 17; systematizing results, 61ff., 69-98 (Chap. VI); two phases

Learning process, *continued*

of, 27f., 52; when called for, 26, 51ff.; wholeheartedness as factor, 29, 33. *See also* Education; School; Objectives, educational; Curriculum

Liberty, conception of, 37, 39ff.

Life: as organism-environmental interaction, 22, 46, 78f.; dynamic vs. static, 22-26; essentially goal-seeking, 22-26; involves guidance, 29f., 54f., 58f.; presents continual novelty, 22ff., 46, 52

Lincoln, Abraham, his American dream, 19

Locke, John, social contract theory, 42

Logical organization: fallacious as order of learning, 89-94, 95-96; said to be jeopardized, 58

"Map of values," 96-98

Marks, and emotional adjustment, 81

Meanings: learned through experience, 86ff.; meaningful connections, 63, 64f., 97, 110ff.

Means, directed by purpose, 28f.

Method: objectives for curriculum and method, 108-115 (Chap. VIII)

Mind, in dualistic science, 16, 17. *See also* Dualism; Thinking

Moral conduct, essentially acting on study, 82f.

Moral education: how secured, 53, 60; in acting on thinking, 53, 82f.

Motivation: starts with subject matter, 33; to facilitate drill, 33

Natural rights untenable, 42

Newtonian scientific method. *See* Analytic method (in science); Atomism; Dualism

Nonsense syllables, inadequate for study of learning, 17

Novelty, requires thinking, 14-15, 24f., 62

Objectives, educational: in dualistic science, 16-17, 18; "map of values" in lieu of, 96-98; objectives for cur-

- riculum and method, 108-115 (Chap. VIII); on dynamic basis, 114f. *See also* Aims (educational)
- Objectivity, misconceived in dualistic science, 16-17
- Old-fashioned virtues, said to be jeopardized, 58
- Organism: acting as a whole, 18, 23-24, 25f., 78ff.; involved in all learning, 28ff., 30f., 52f.
- Organism-environmental unity, 22, 78ff. *See also* Life
- Organization of learning results: calls for generalization, 64; danger in old theory, 70; how effected, 61ff., 69-98 (Chap. VI); inherent in learning, 64f.; logical vs. psychological approach, 89-94, 95-96; personally made, 64
- Pattern, behavior: changed in learning, 26-27 may require changing, 25
- Personality adjustment. *See* Emotional adjustment
- Philosophy of education, need for, 67
- Planning, social, how good, 20, 35
- Platonism: knowledge as prior to knowing, 21-22
- Progress, how possible, 37, 39f.
- Progressive education: criticized, 54, 69; seems haphazard, 69f.
- Project (or learning enterprise): desirable characteristics of, 56, 66; how managed, 56f., 66f.; variety needed, 65, 66. *See* Project teaching
- Project teaching. *See* Situation, facing a; Acting on thinking; Purpose psychology (organismic outlook); Project; Class group process
- Promotions and emotional adjustment, 81
- Psychological order of learning vs. logical, 89-94, 95-96
- Psychology (general), recent developments in, 21-33 (Chap. II). *See also* Psychology (organismic outlook); Psychology (based on Newtonian science)
- Psychology (based on Newtonian science): atomistic, 16f., 17f.; dualistic, 16, 17f.; favors external control,

- Psychology (based on Newtonian science), *continued*
18; for handing down, 26f.; mechanistic, 25; reduces thinking to non-thinking mechanism, 25; slights thinking, 16, 17, 25, 32f.; stresses drill, 26f., 32f.
- Psychology (organismic outlook): discussed, 17-18, 21-33 (Chap. II), 78ff.; characterized by goal-seeking, 25f., 28f., 33; origin of, 22
- Public education. *See* Education, public
- Purpose: essence of thoughtful living, 26; guides educative process, 28f.; in education, 18, 26ff., 110; purposive vs. purposeful action, 23
- Reading, beginning, special efforts necessary, 68
- Responsibility: as educational aim, 47, 76; product of self-other process, 41f.
- Rousseau, social contract theory, 42
- S→R in "scientific" psychology, 17, 18
- School: as preparation for life, 32; exists to furnish guidance, 59; for authoritative transmission, 22; its new task, 15, 35. *See* Education
- Science: analytic method, 16-18; brings rapid change, 14; new outlook, 16-17; Newtonian, 17. *See also* Atomism; Dualism; Analytic method (in science)
- Secondary school: a suggested new secondary curriculum, 99-107 (Chap. VII); behind elementary, 33, 48; departmentalized teaching, 99, 100f., 105; guidance in, 100, 101ff.; specialization, 100-101, 103f., 105f.; "subjects" of study to grow out of interests developed, 102-104, 106
- Self; built in learning, 28f., 41; continually rebuilt, 28f., 41f.; correlative of the culture, 42; how upbuilt, 28. *See also* Self and other
- Self and other: discussed, 41f.; basis of higher life, 41f.
- Self-direction, as goal of education, 18, 31, 47, 55f., 60, 72, 84, 114-115
- Set (or attitude), discussed, 23f.

- Simultaneous learnings, explained, 29ff.
- Situation: correlative of person, 49f.; if new, calls for thinking, 13-15, 24f.; to each its behavior pattern, 25. *See also* Situation, facing a
- Situation, facing a: analysis of, 48ff.; as unit of educative process, 49ff., 61f.; necessary to real learning, 31, 33, 48ff., 62f., 87. *See also* Situation; Testing
- Skills and habits, 109
- Social contract theory untenable, 42
- Social-economic situation, current: discussed, 34-45 (Chap. III); demands new type of education, 13-15, 19-20, 34ff.; out of order, 34f. *See also* American dream
- Society: must prepare for change, 44f.; prior to its members, 41ff. *See also* Culture; Institutions
- Specialization: better basis proposed, 104f.; overdone in secondary school, 100-101; unnecessary and undesirable for most, 103ff.
- Standardized tests in "scientific" education, 17-18
- Standards: built in self-other relationship, 41f.; function of, 61; how built, 41f., 54f., 60f.
- Study, as effort at control, 24f., 51
- Subject matter: called into play by living, 31, 68; created by learning, 18; how organized, 61ff.; needed in life, 58f.; on old basis, 18, 21f., 31ff., 47f., 49f., 55f., 59. *See also* Systemization of learning results
- Subject-matter-set-out-to-be-learned: adult organization, 64; dangers of, 49f., 55f., 64; the old way, 18, 21-22, 31ff., 47f., 49f., 55f., 64, 108f.
- Subjects of study: as atomistic, 108f.; in secondary school to grow out of interests developed, 102-104, 106
- Systemization of learning results. *See* Organization of learning results
- Teacher: as guiding, 54ff., 62f., 65ff., 100, 101ff.; co-operation of teachers, 65, 66, 67; equipment of, 67;

Teacher, *continued*

more active in new education, 55; place of, 33, 54ff., 60ff., 65ff., 91ff.; wrong emphasis, 49f., 55f.

Technology, rapid change of, 14

Testing: by inherent results, 51, 63; for diagnosis, 67; standardized tests, 17, 67

Thinking: as instrumentally adaptive, 22, 24-25; creative, 22, 33, 51; demanded by the doubtful, 14-15, 24f., 79f.; denied to the many, 32; desirability of "thinking through," 56-57, 62, 65, 66; essential to moral conduct, 82f.; how learned, 85-89; learning to judge, 84; slighted by Newtonian scientific education, 16, 17, 32.
See also Dualism; Mind

Universities to foster criticism, 44f.

Upset (stirring to action): described, 22-23; correlative of a situation, 48f.; implies goals, 23. *See also* Life

Values: as guides in teaching, 66f.; constantly criticized, 67; elements of a philosophy, 67

Want (urge, wish), arises in upsets, 23

Wholeheartedness as factor in learning, 29, 33, 49

UNIVERSAL
LIBRARY



126 198

UNIVERSAL
LIBRARY